SONY

FLAT PANEL DISPLAY

FWD-50PX2

FLAT PANEL DISPLAY SPEAKER SYSTEM
SS-SP50FW

TV STAND
SU-50FW

SERVICE MANUAL
1st Edition

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

Power cord plug should be pulled out from the wall before starting the service operation.
If power switch is turned OFF only, you may receive an electric shock, because the unit may have an electric inside.
Therefore, you should pull out the power cord plug from the wall before starting the service operation.

注意

指定以外の電池に交換すると，破裂する危険があります。
使用済の電池は，説明書に従って処理してください。

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.

Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

ADVARSEL

Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en likvärdig typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt gällande föreskrifter.

VAROITUS

Paristo voi räjähtää jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For the customers in the Netherlands
Voor de klanten in Nederland

Hoe u de batterijen moet verwijderen, leest u in de tekst van deze handleiding.

Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).

Für Kunden in Deutschland

Entsorgungshinweis: Bitte werfen Sie nur entladene Batterien in die Sammelboxen beim Handel oder den Kommunen. Entladen sind Batterien in der Regel dann, wenn das Gerät abschaltet und signalisiert “Batterie leer” oder nach längerer Gebrauchsdauer der Batterien “nicht mehr einwandfrei funktioniert”. Um sicherzugehen, kleben Sie die Batteriepole z.B. mit einem Klebestreifen ab oder geben Sie die Batterien einzeln in einen Plastikbeutel.

For the customers in the U.S.A. and Canada

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.
You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.

For more information regarding recycling of rechargeable batteries, call toll free 1-800-822-8837, or visit http://www.rbrc.org/

Caution: Do not handle damaged or leaking Lithium-Ion batteries.

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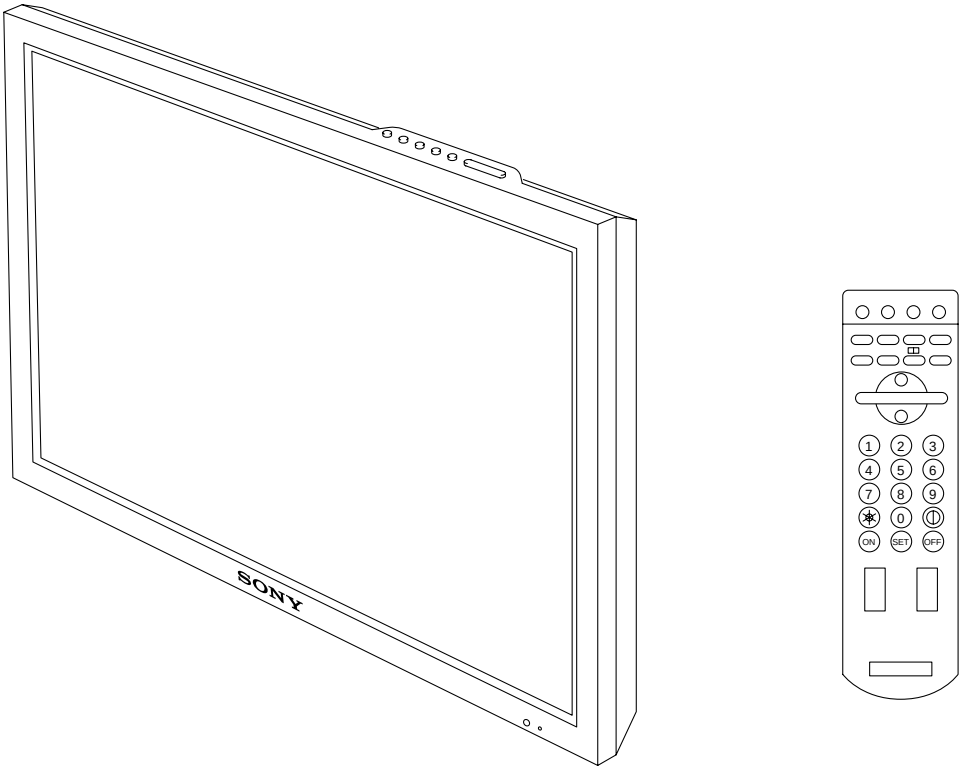
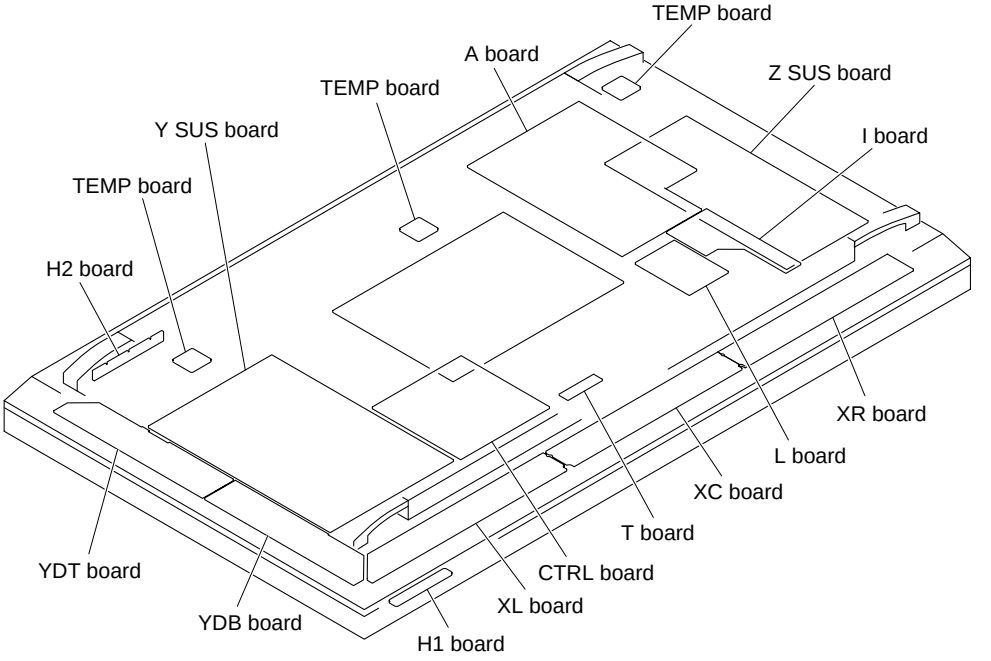
Section 1
Service Overview

1-1. Appearance Figure



1-2. Board Location

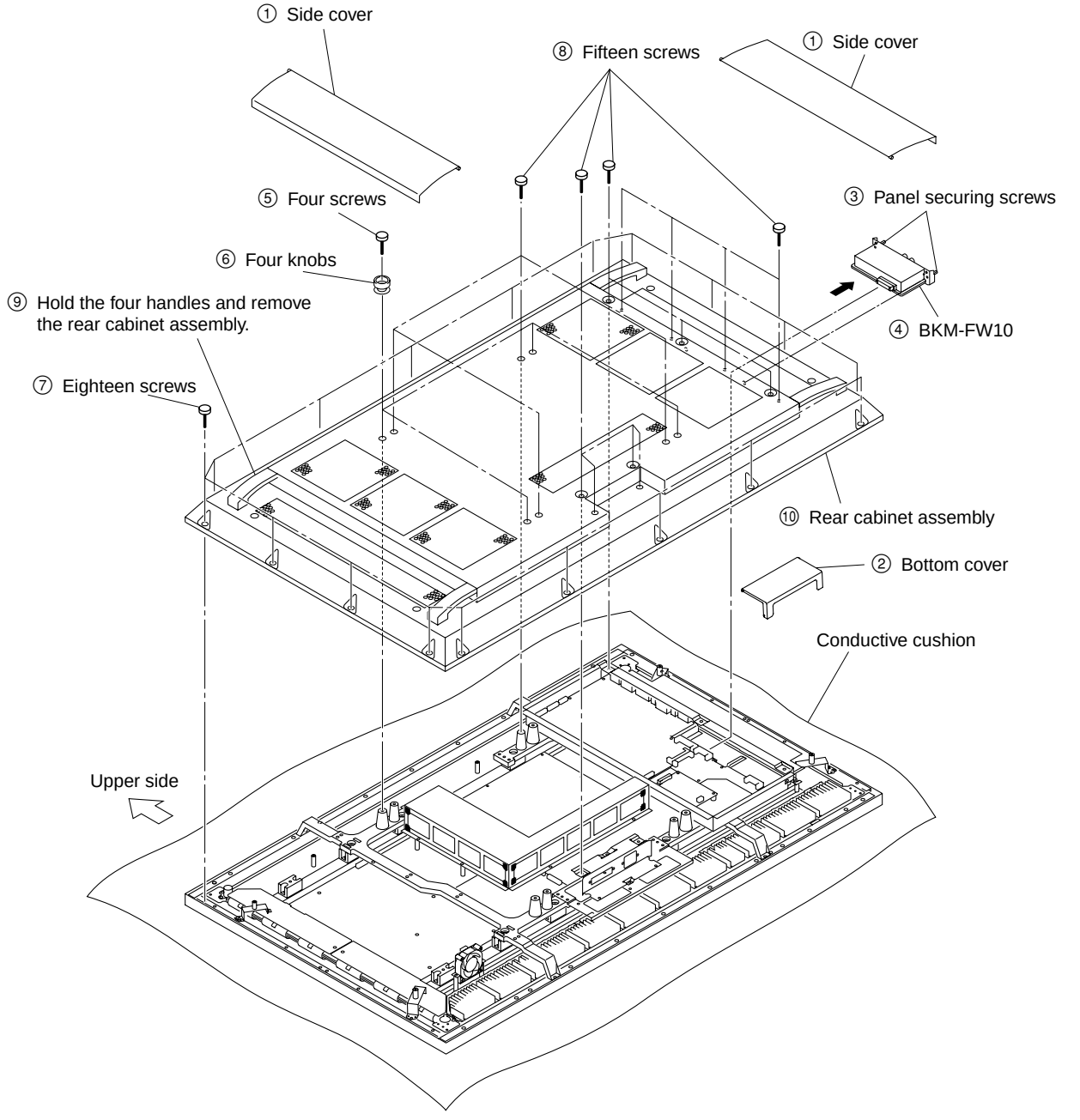


1-3. Disassembly

Note

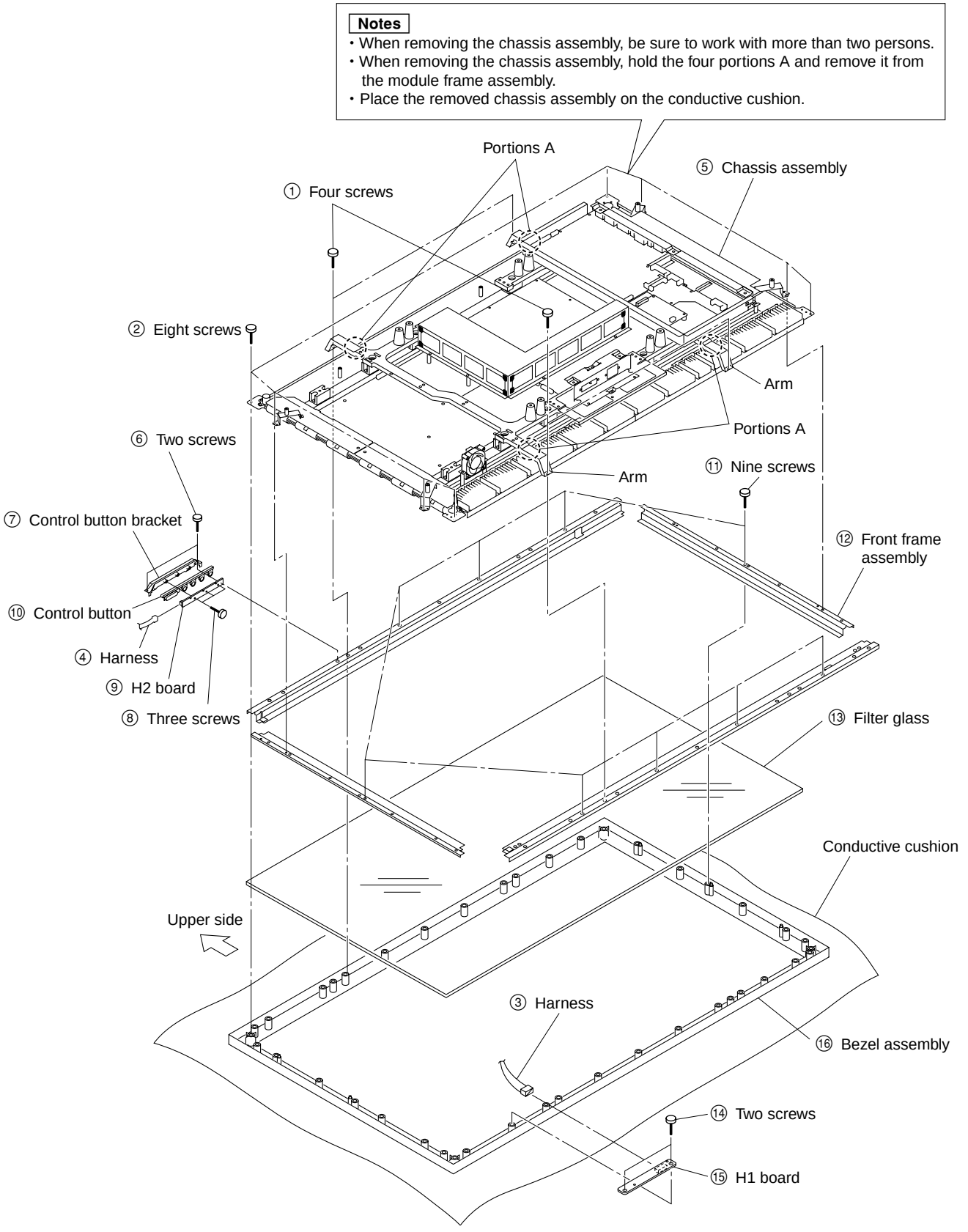
When removing/installing the cabinet and replacing the board, place the unit on the conductive cushion.

1-3-1. Rear Cabinet Assembly



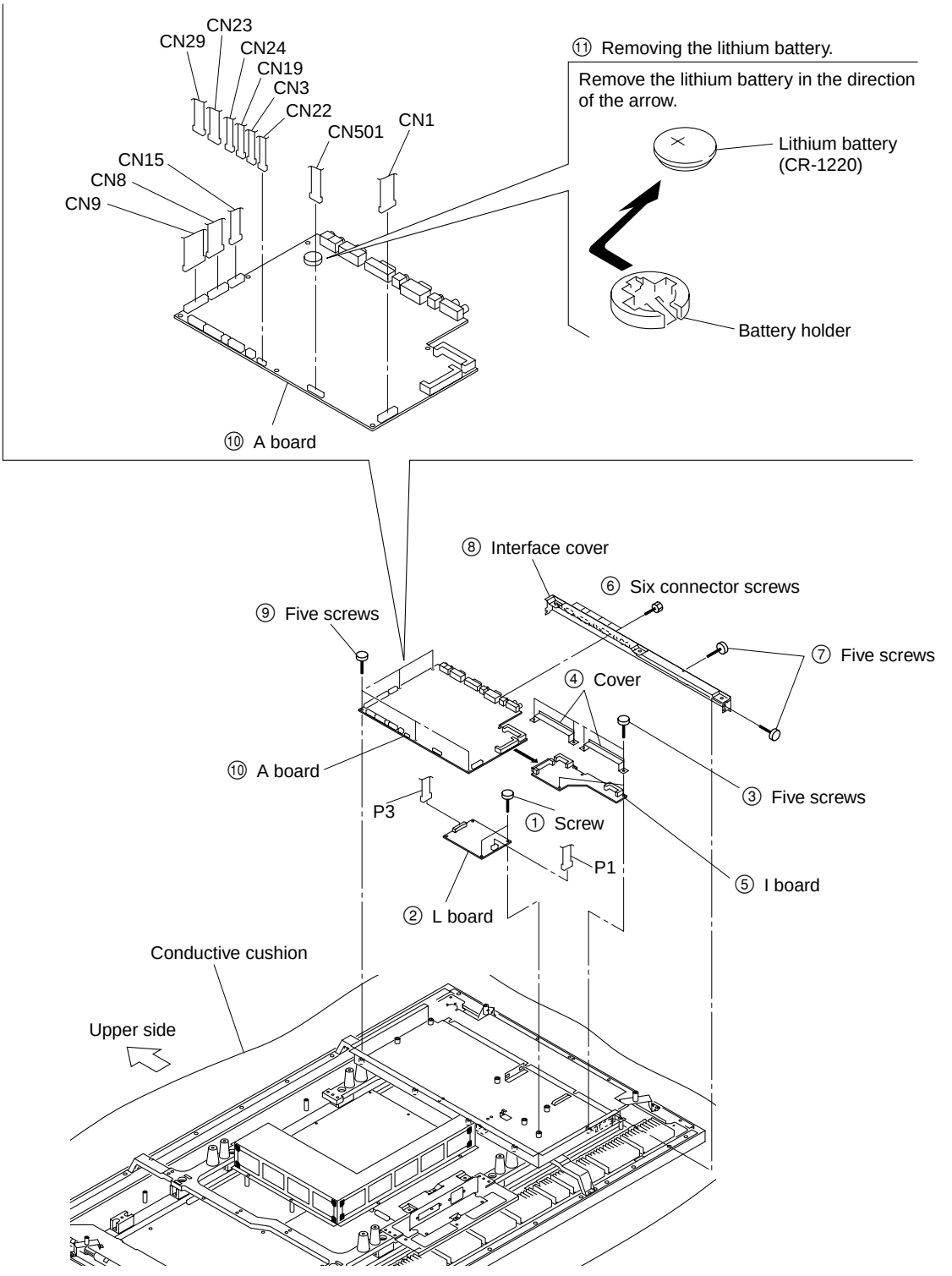
1-3-2. Bezel Assembly/H1 Board/H2 Board

• Remove the rear cabinet assembly. (Refer to Section 1-3-1.)


Notes
• When removing the chassis assembly, be sure to work with more than two persons.
• When removing the chassis assembly, hold the four portions A and remove it from the module frame assembly.
• Place the removed chassis assembly on the conductive cushion.
Portions A
⑤ Chassis assembly
① Four screws
② Eight screws
Arm
Portions A
⑥ Two screws
Arm
⑪ Nine screws
⑦ Control button bracket
⑫ Front frame assembly
⑩ Control button
④ Harness
⑨ H2 board
⑧ Three screws
⑬ Filter glass
Conductive cushion
Upper side
③ Harness
⑯ Bezel assembly
⑭ Two screws
⑮ H1 board

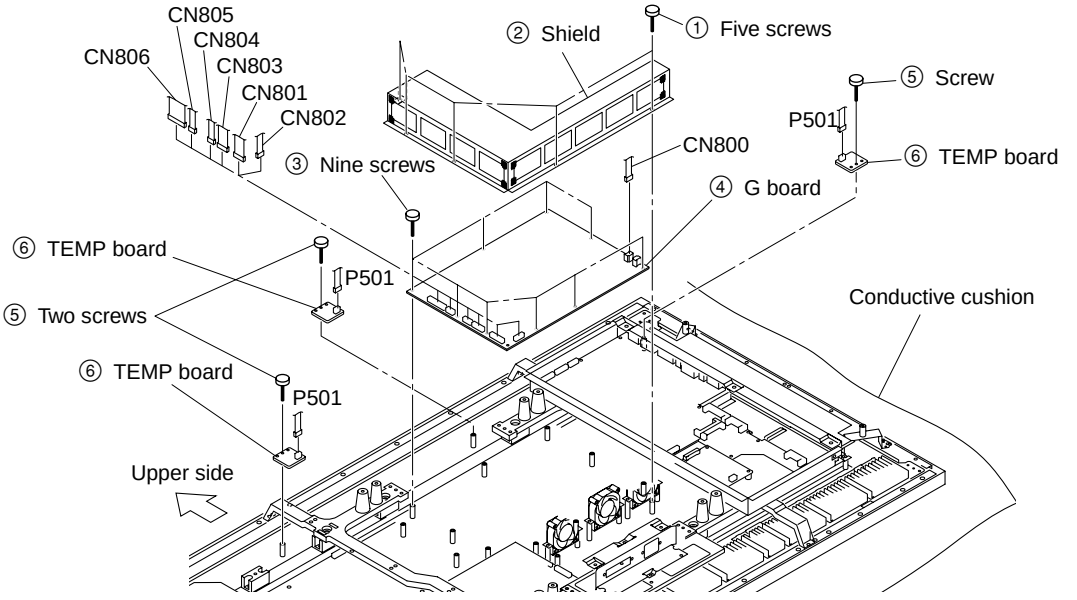
1-3-3. A Board/L Board/I Board

• Remove the rear cabinet assembly. (Refer to Section 1-3-1.)



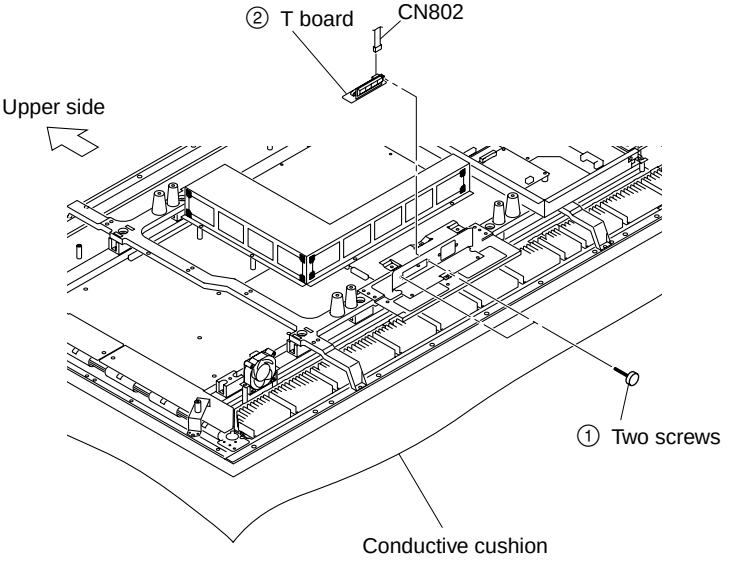
1-3-4. G Board/TEMP Board

• Remove the rear cabinet assembly. (Refer to Section 1-3-1.)



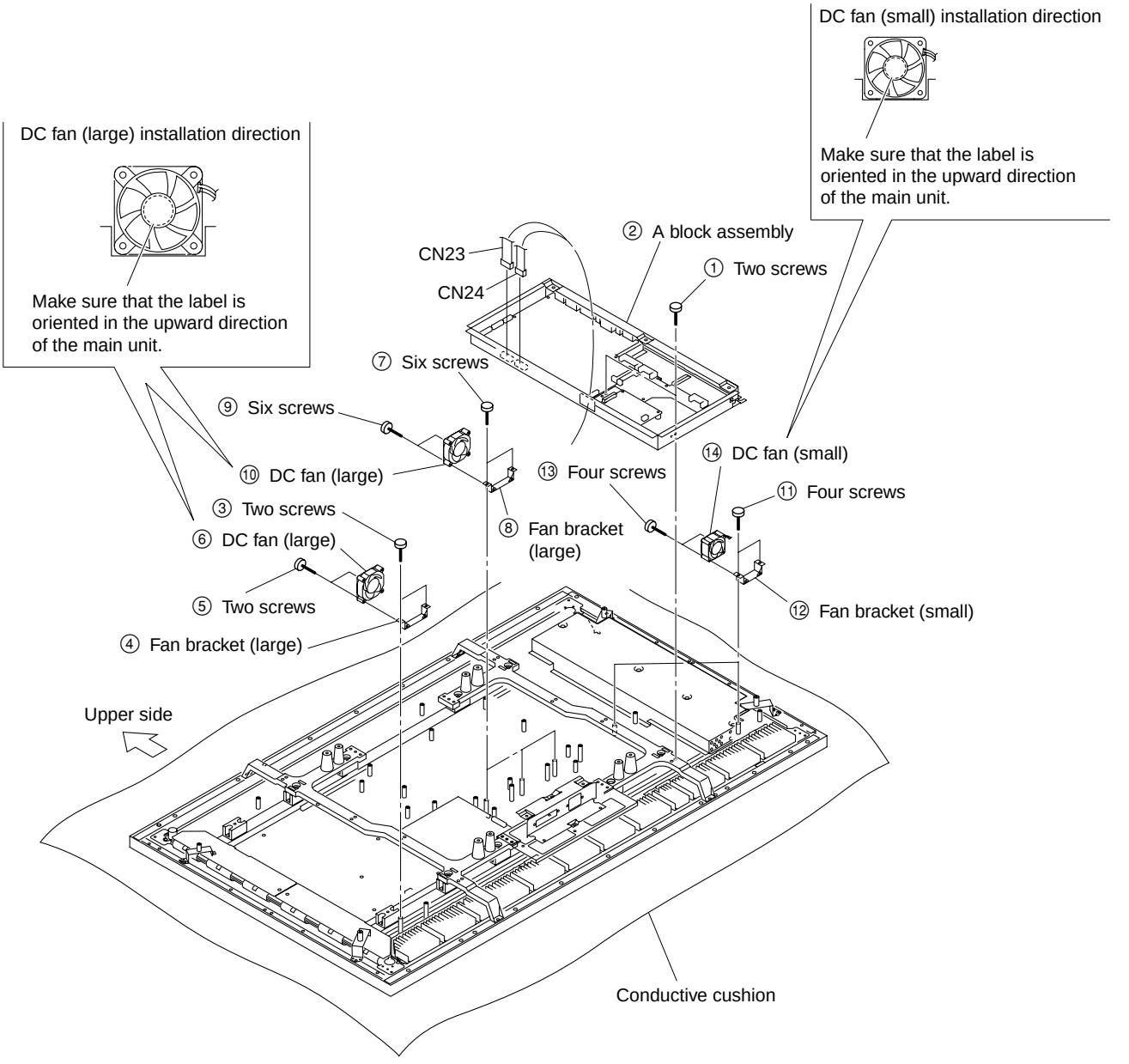
1-3-5. T Board

• Remove the rear cabinet assembly. (Refer to Section 1-3-1.)



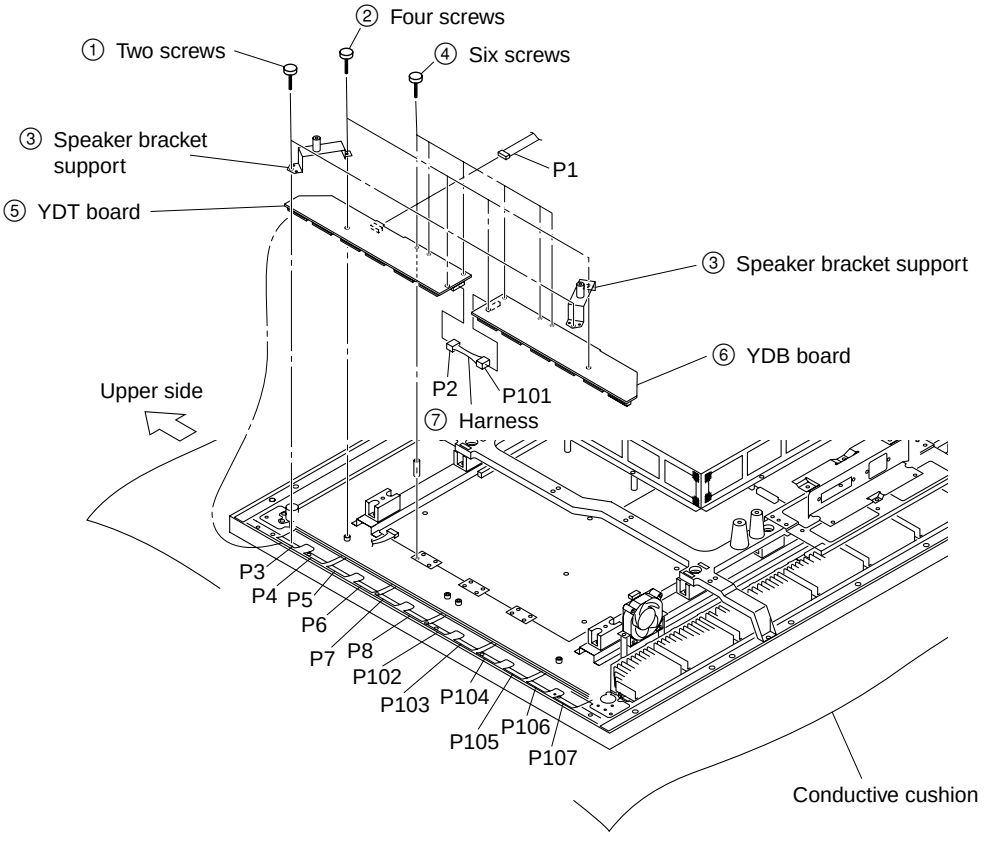
1-3-6. A Block Assembly/DC Fan

- Remove the rear cabinet assembly. (Refer to Section 1-3-1.)
- Remove the G board. (Refer to Section 1-3-4.)


DC fan (small) installation direction
Make sure that the label is oriented in the upward direction of the main unit.
DC fan (large) installation direction
Make sure that the label is oriented in the upward direction of the main unit.
② A block assembly
CN23
CN24
① Two screws
⑦ Six screws
⑨ Six screws
⑩ DC fan (large)
⑭ DC fan (small)
⑬ Four screws
⑪ Four screws
③ Two screws
⑥ DC fan (large)
⑧ Fan bracket (large)
⑤ Two screws
④ Fan bracket (large)
⑫ Fan bracket (small)
Upper side
Conductive cushion

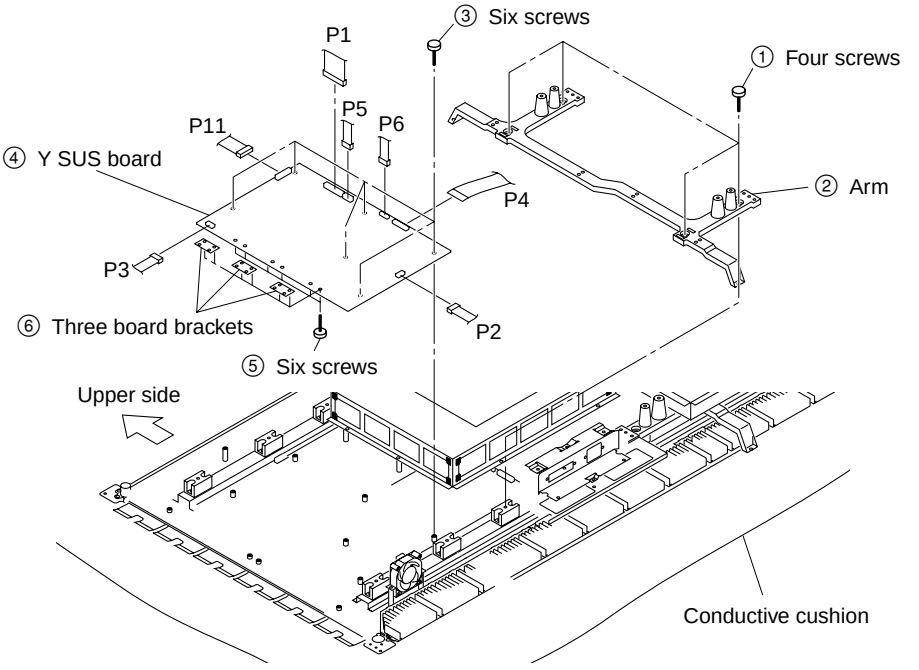
1-3-7. YDT Board/YDB Board

- Remove the rear cabinet assembly. (Refer to Section 1-3-1.)
- Remove the G board. (Refer to Section 1-3-4.)



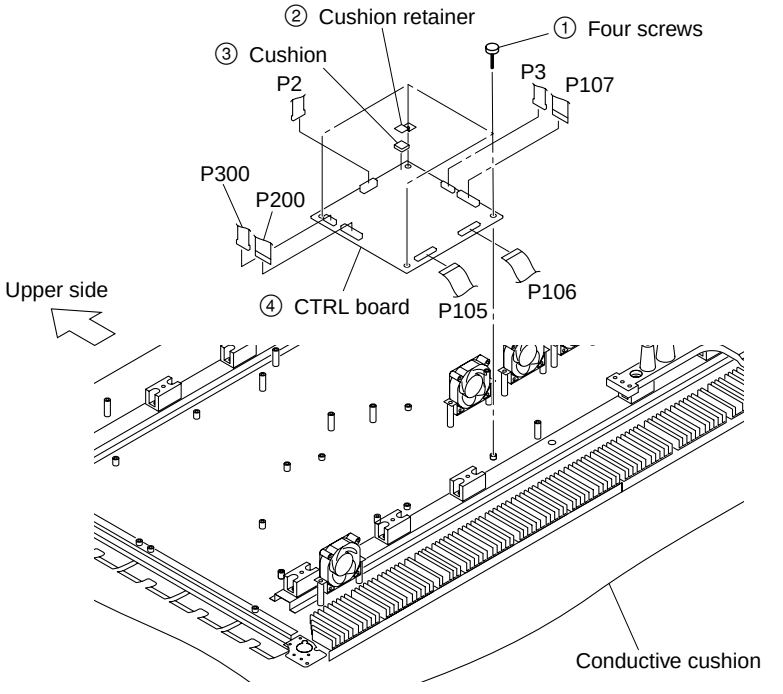
1-3-8. Y SUS Board

- Remove the rear cabinet assembly. (Refer to Section 1-3-1.)
- Remove the bezel assembly. (Refer to Section 1-3-2.)
- Remove the YDT board and YDB board. (Refer to Section 1-3-7.)



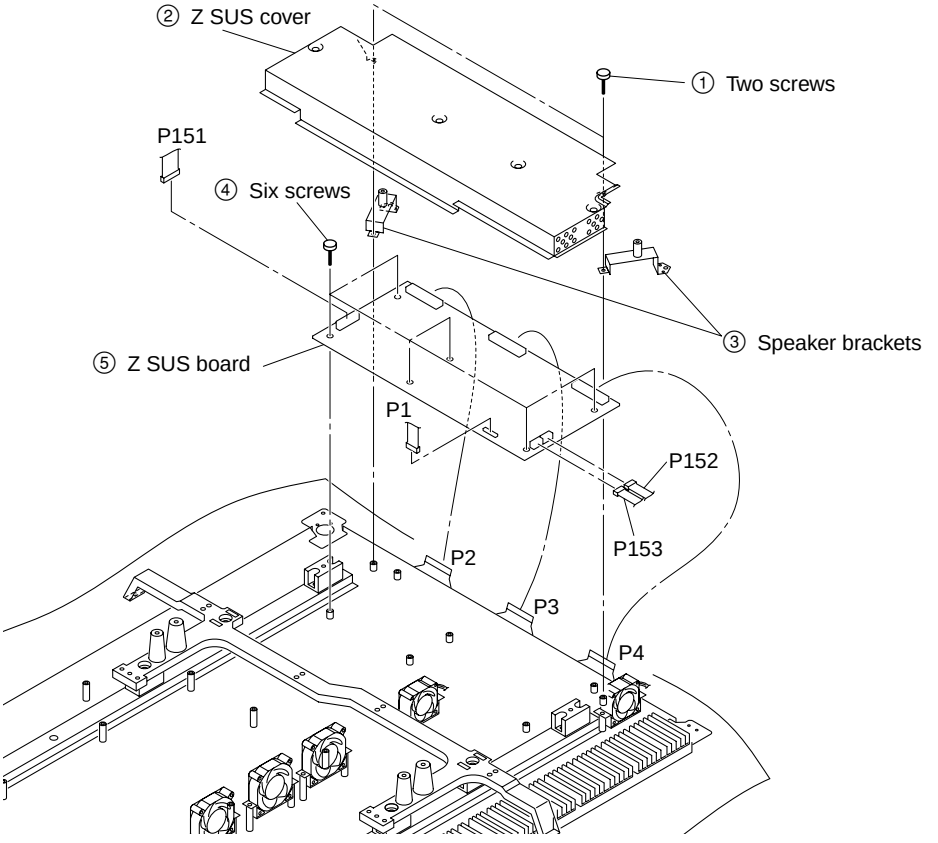
1-3-9. CTRL Board

- Remove the rear cabinet assembly. (Refer to Section 1-3-1.)
- Remove the bezel assembly. (Refer to Section 1-3-2.)
- Remove the A block assembly. (Refer to Section 1-3-6.)



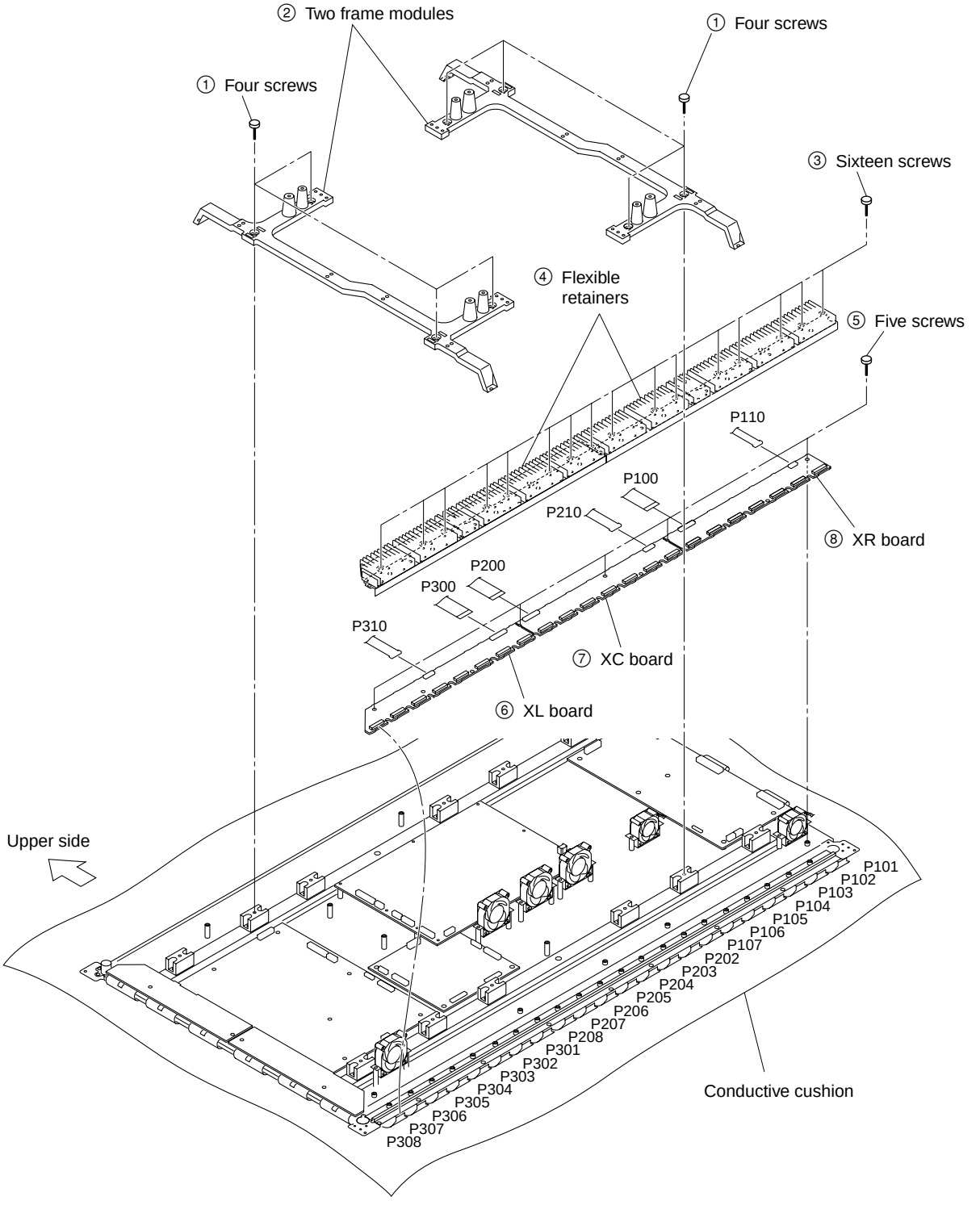
1-3-10. Z SUS Board

- Remove the rear cabinet assembly. (Refer to Section 1-3-1.)
- Remove the bezel assembly. (Refer to Section 1-3-2.)
- Remove the A block assembly. (Refer to Section 1-3-6.)



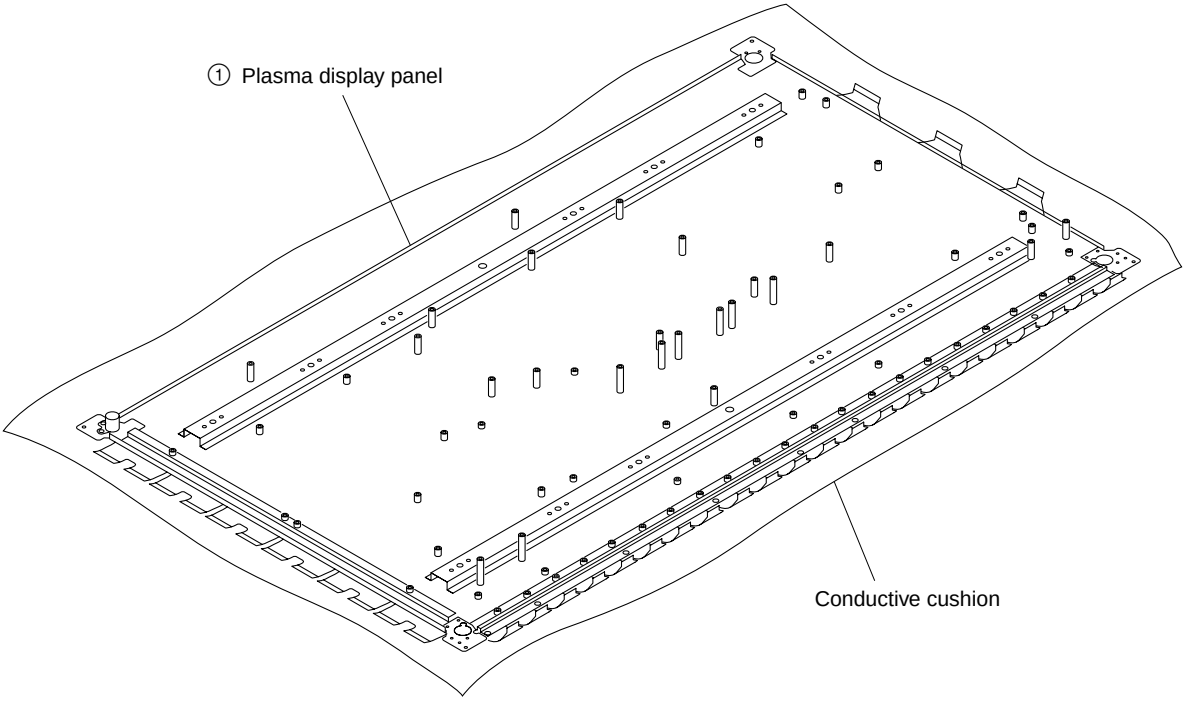
1-3-11. XL Board/XC Board/XR Board

- Remove the rear cabinet assembly. (Refer to Section 1-3-1.)
- Remove the bezel assembly. (Refer to Section 1-3-2.)
- Remove the G board. (Refer to Section 1-3-4.)
- Remove the A block assembly. (Refer to Section 1-3-6.)



1-3-12. Plasma Display Panel

• Remove each part. (Refer to Sections 1-3-1 to 1-3-11.)

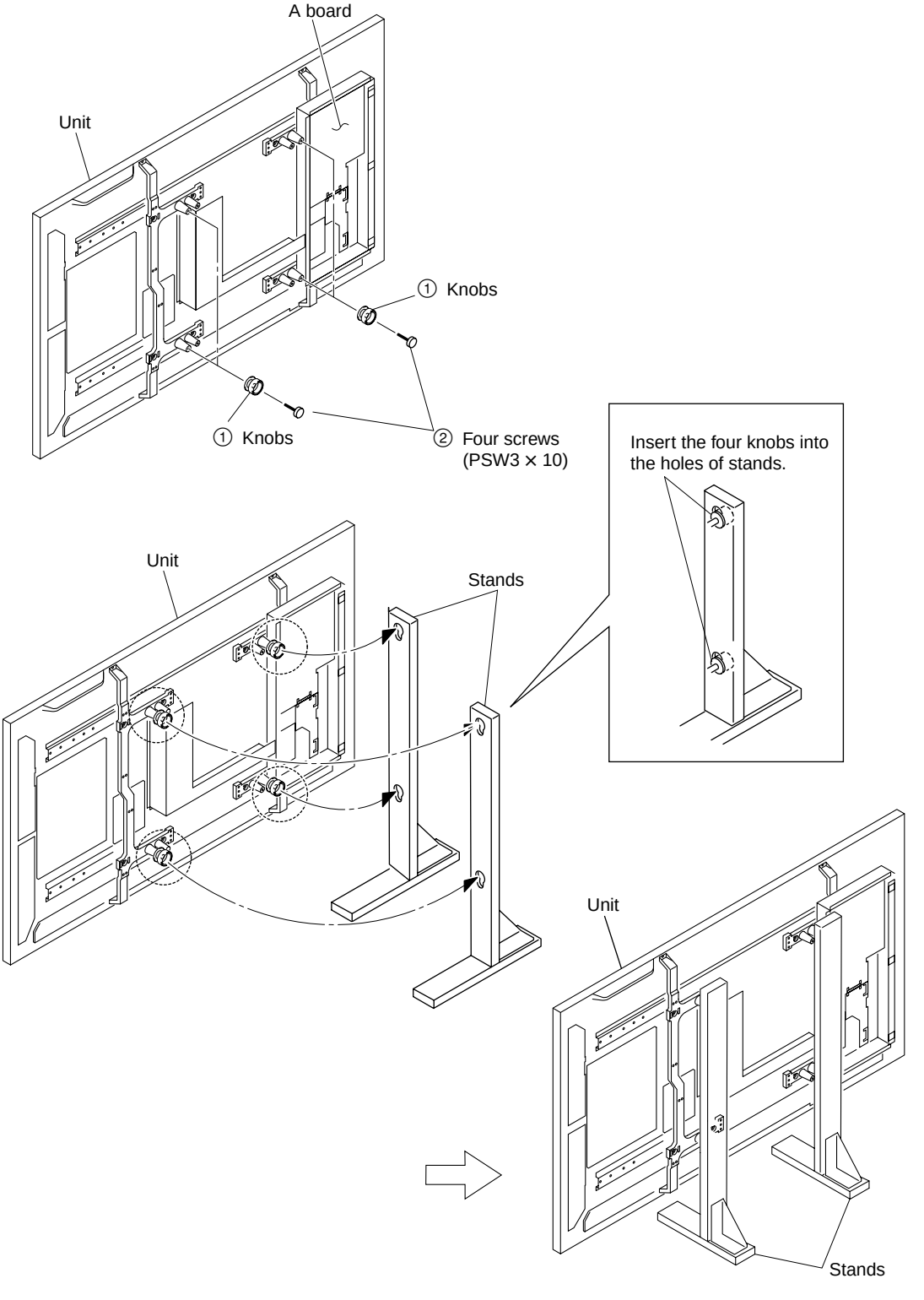


1-4. Service Position

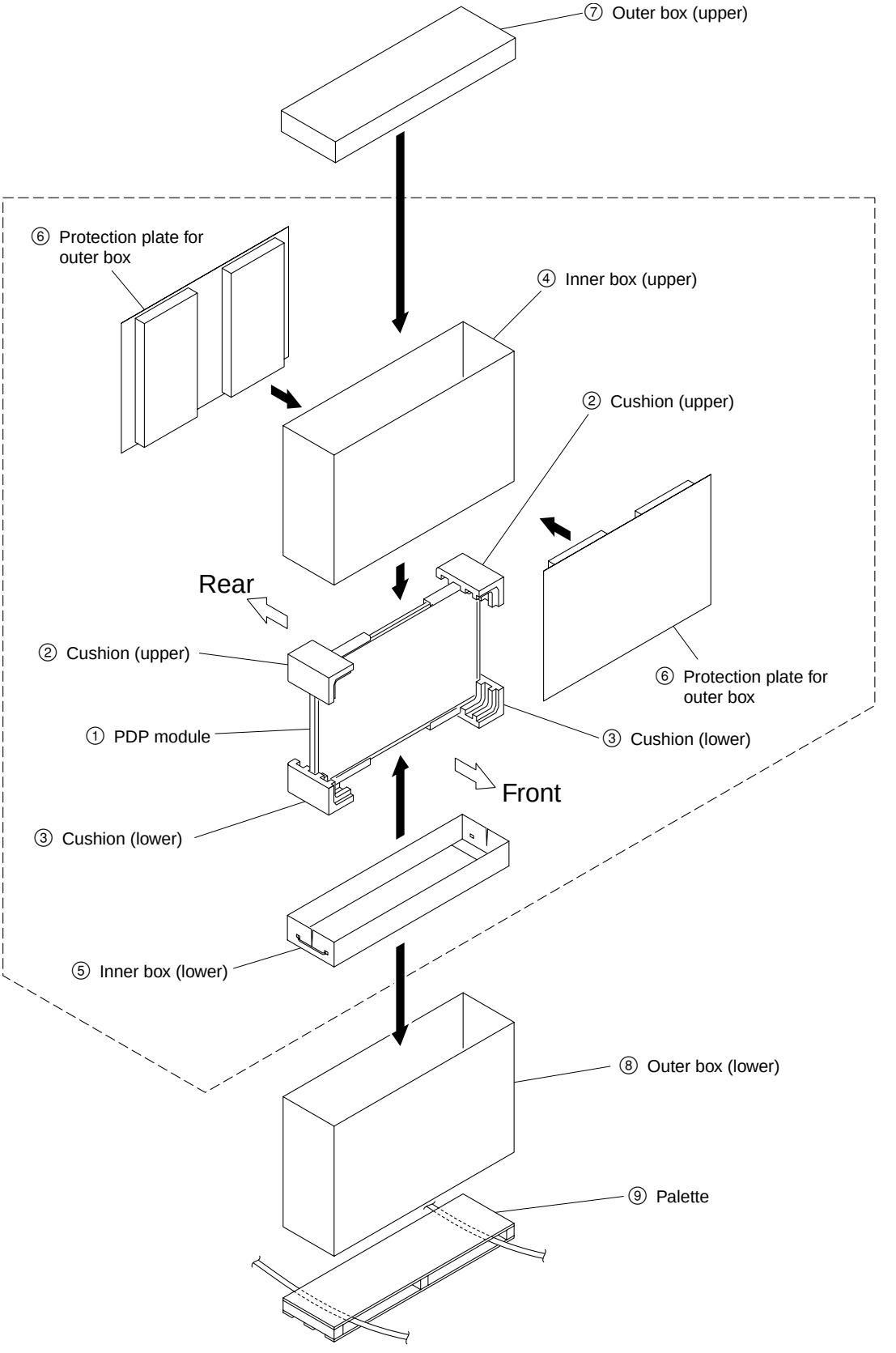
1-4-1. Service Position of A Board

Notes

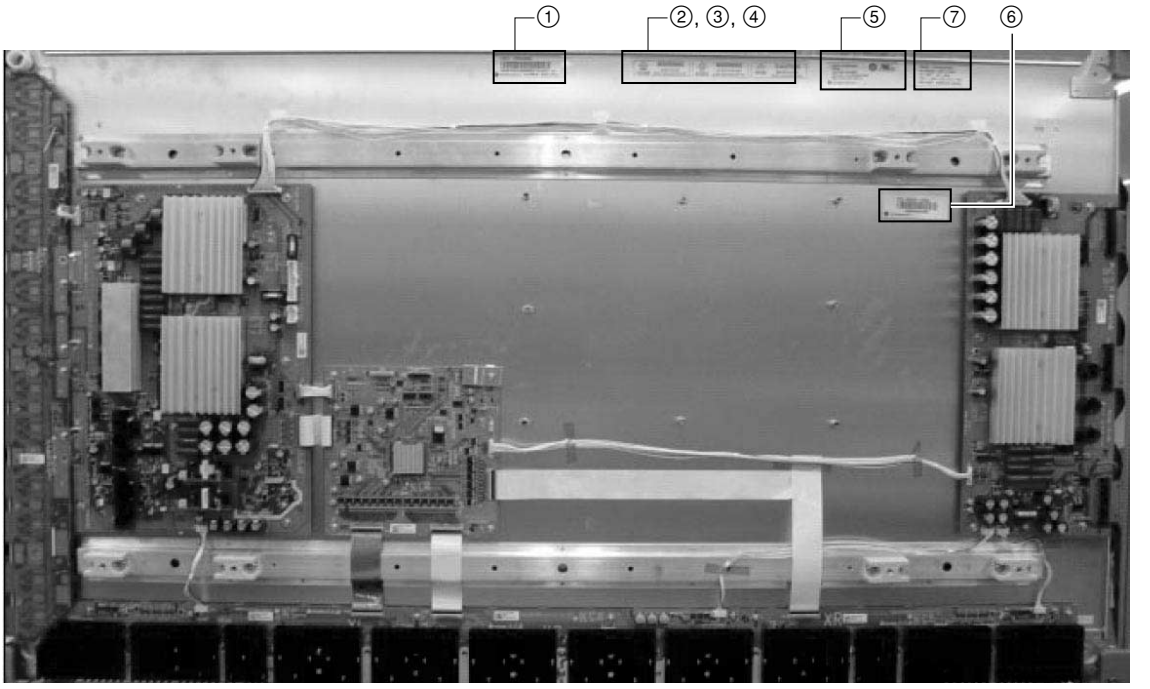
- When attaching this unit to the stands, be sure to work with two persons.
- After attaching this unit to the stands, make sure that the knobs are securely inserted into the holes of the stands.
- When assembling the service position, be sure to repair after removing the rear cabinet.



1-5. Packing of the Plasma Display Panel



1-6. Label Information of Module

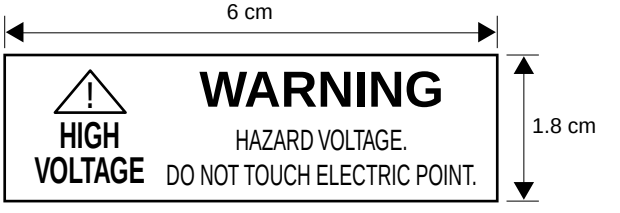


① Identification label
② Warning label (High voltage)
③ Warning label (Hot surface)
④ Caution Label (Mechanical Hazard)
⑤ Safety approval label
⑥ Serial No. of frame
⑦ Voltage label

1-6-1. Identification Label

- Model Name
- Bar Code (Contains the manufacture No.)
- Manufacture No.
- The trade name of LG Electronics
- Manufactured date (Year & Month)
- The place Origin
- Mode Suffix

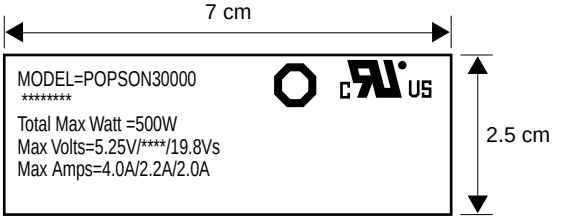
1-6-2. Warning Label (High Voltage)



1-6-3. Warning Label (Hot Surface)

1-6-4. Caution Label (Mechanical Hazard)

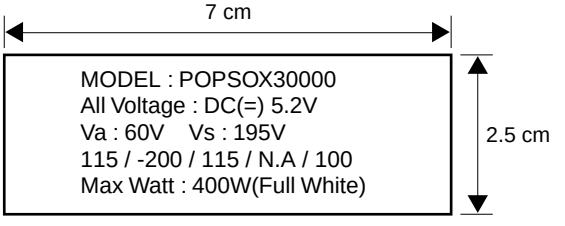
1-6-5. Safety Approval Label



- Model Name
- Max. Watt (Full White)
- Max. Volts
- Max. Amps
- The Trade Name of LG Electronics
- TUV Approval Mark
- UL Approval Mark
- UL Approval No.

1-6-6. Serial No. of Frame

1-6-7. Voltage Label



1-7. Warning on Power Connection

Use a proper power cord for your local power supply.

	The United States, Canada	Continental Europe	UK, Ireland, Australia, New Zealand	Japan
Plug type	VM0233	COX-07/636	–[1)]	VM1296
Female end	VM0089	COX-02/VM0310B	VM0303B	VM1313
Cord type	STV	H05VV-F	CEE (13) 53rd (O, C)	HVCTF
Rated Voltage & Current	10 A/125 V	10 A/250 V	10 A/250 V	10A/125V
Safety approval	UL/CSA	VDE	VDE	DENAN-HO

1) Use an appropriate rating plug which is applied to local regulations.

1-8. Unleaded Solder

Boards requiring use of unleaded solder are printed with a lead free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

LEAD FREE MARK

Notes

- Be sure to use the unleaded solder for the printed circuit board printed with the lead free mark.
- The unleaded solder melts at a temperature about 40 °C higher than the ordinary solder, therefore, it is recommended to use the soldering iron having a temperature regulator.
- The ordinary soldering iron can be used but the iron tip has to be applied to the solder joint for a slightly longer time. The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful.

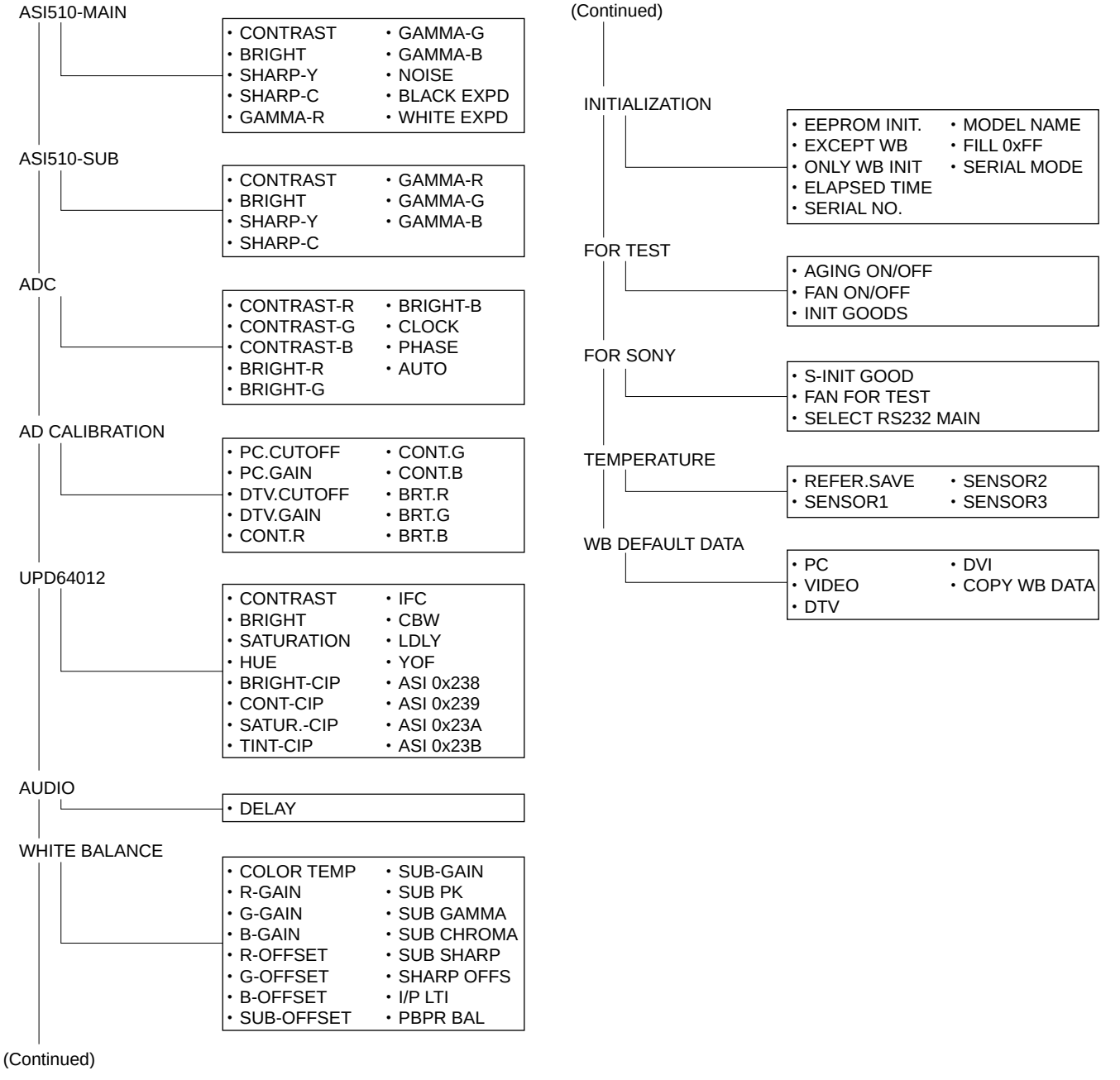
Section 2
Service Mode and Adjustment

2-1. Service Mode

2-1-1. Service Mode Startup Procedure

1. Press the ENTER button of the remote controller (RM-980).
2. Enter the number 1 → 8 → 2 in order.

2-1-2. Configuration



2-1-3. Description of Main Items

1. AD CALIBRATION

PC.CUTOFF: Sets Cut Off of PC mode.
PC.GAIN: Sets Gain of PC mode.
DTV.CUTOFF: Not used
DTV.GAIN: Not used
CONT.R: Not used
CONT.G: Not used
CONT.B: Not used
BRT.R: Not used
BRT.G: Not used
BRT.B: Not used

2. AUDIO

DELAY: Sets delay timing of Audio sound. (0, 5, 15, 20, ...115, 120)

3. WHITE BALANCE

COLOR TEMP: Sets color temperature (11000, 9300, 6500).
R-GAIN: Sets Red Gain (contrast).
G-GAIN: Sets Green Gain (contrast).
B-GAIN: Sets Blue Gain (contrast).
R-OFFSET: Sets Red Offset (brightness).
G-OFFSET: Sets Green Offset (brightness).
B-OFFSET: Sets Blue Offset (brightness).
SUB-OFFSET: Not used
SUB-GAIN: Not used

4. INITIALIZATION

EEPROM INIT.: Initializes EEPROM to default data.
EXCEPT WB: Initializes data except white balance.
ONLY WB INIT: Initializes white balance data only.
ELAPSED TIME: Initializes Operation Time.
SERIAL NO.: Initializes Serial Number.
MODEL NAME: Initializes Model Name.
FILL 0xFF: Initializes EEPROM to 0xFF.
SERIAL MODE: Sets Serial Mode to communicate with the set by using RS-232C.
If INT GOODS is run, this is set to SONY.
SONY: This is for user to control the set by using RS-232C as remote controller.
LG: This is for setting white balance.
ETC: This is for developer.

5. FOR TEST

AGING ON/OFF: Sets Aging Mode on/off.
FAN ON/OFF: Sets fan on/off.
INIT GOODS: Initializes whole data for user to be able to use the set.

6. FOR SONY

S-INIT GOOD: Initializes whole data except Operation Time for user to be able to use the set.
FAN FOR TEST: Sets fan on/off.

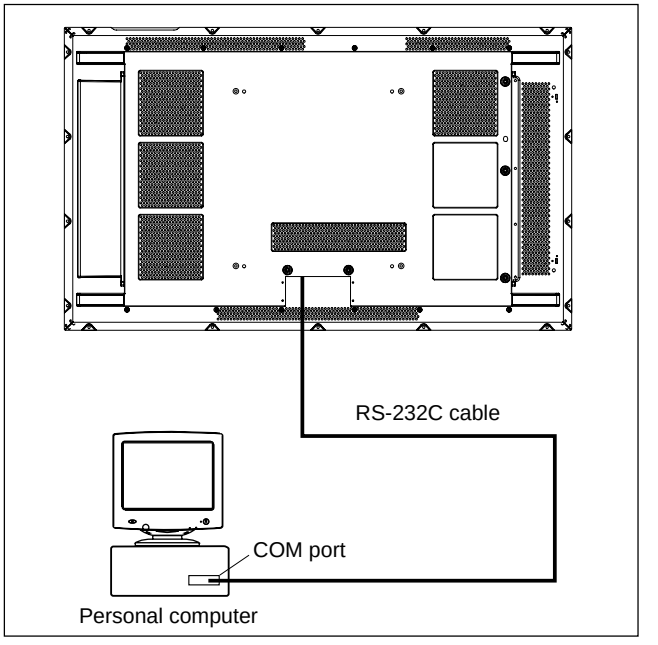
Note

This mode is used for the check in service. The fan is stopped under normal condition. It operates when the temperature inside of this unit rises.

SELECT RS232C: Not used

7. WB DEFAULT DATA

PC: Not used
VIDEO: Not used
DTV: Not used
DVI: Not used
COPY WB DATA: Not used



Cable connection

2-2. White Balance Adjustment

2-2-1. Initialization

Initialize all information stored in EEPROM.

1. Press the ENTER button of the remote controller (RM-980).
2. Enter the number 1 → 8 → 2 in order.
   The service mode starts up.
3. Select INITIALIZATION menu and run FILL 0xFF.
   Note
   When the setting is completed, the unit becomes ON state automatically after power ON/OFF.

2-2-2. AD Calibration

Run Auto Calibration in PC (1360 × 768@60Hz) signal.

2-2-3. 1PC Signal

1. Start the service mode. (Refer to Section 2-1-1.)
2. Select AD CALIBRATION menu.
3. Input Full Black (No Video) pattern.
4. Run PC. CUTOFF.
5. Input Full White Pattern.
6. Run PC.GAIN.

2-2-4. White Balance

After aging the set about 30 min., adjust color matrix of each color temperature 11000K/9300K/6500K.

Preparation for adjustment

Required equipment

- Signal generator (ex: VG-828)
- Color analyzer (ex: CA1000)

Signals

Note

If want to know detail timing. Refer to Sony Timing Spec.

- PC WXGA (1360 × 768@60 Hz)
- 1080I (Y/Pb/Pr)
- 480P (Y/Pb/Pr)
- NTSC composite
- PAL composite
- 480I (NTSC component)
- 575I (PAL component)

Signal level

700 mV p-p

Signal pattern

- 191-level (75IRE) full white pattern
- 2/16 gray (16'st step at 255 level)

Color matrix adjustment

Run the following program sequence in order PC → 1080i → 480p → 480i → 575i → NTSC Composite → PAL Composite.

1. After input each signal, adjust Sub Offset.
   - Input 16-Gray Pattern.
   - Activate SERVICE MODE OSD and select WHITE BALANCE menu.
   - Change SUB-OFFSET and adjust Brightness of 2/16 gray level into under 0.8cd/m^2.
     (SUB-OFFSET: ±10)
2. Input Full White Pattern.
3. Setup R-GAIN and R/G/B-OFFSET values of the WHITE BALANCE menu into the following TABLE value.

	PC	1080i	480p	480i	575i	NTSC	PAL
R Gain	33	34	34	34	34	34	34
G Gain	32	33	33	33	33	33	33
B Gain	31	32	32	32	32	32	32
R Offset	61	61	61	61	61	61	61
G Offset	60	60	60	60	60	60	60
B Offset	63	63	63	63	63	63	63

4. Change G-GAIN and B-GAIN values and adjust color matrix. (Refer to Sony Color Matrix Spec.)
   11000K: x = 276 (±15), y = 282 (±15)
   9300K: x = 283 (±15), y = 298 (±15)
   6500K: x = 313 (±15), y = 329 (±15)
5. Adjust each color temperature 11000K/9300K/6500K in order repeating steps 3 and 4.

Shipment condition setting

Set up the shipment condition.

1. Start the on service mode.
   (Refer to Section 2-1-1.)
2. After selecting FOR TEST menu, run INIT GOODS.
   Note
   When the setting is completed, the unit becomes ON state automatically after power ON/OFF.

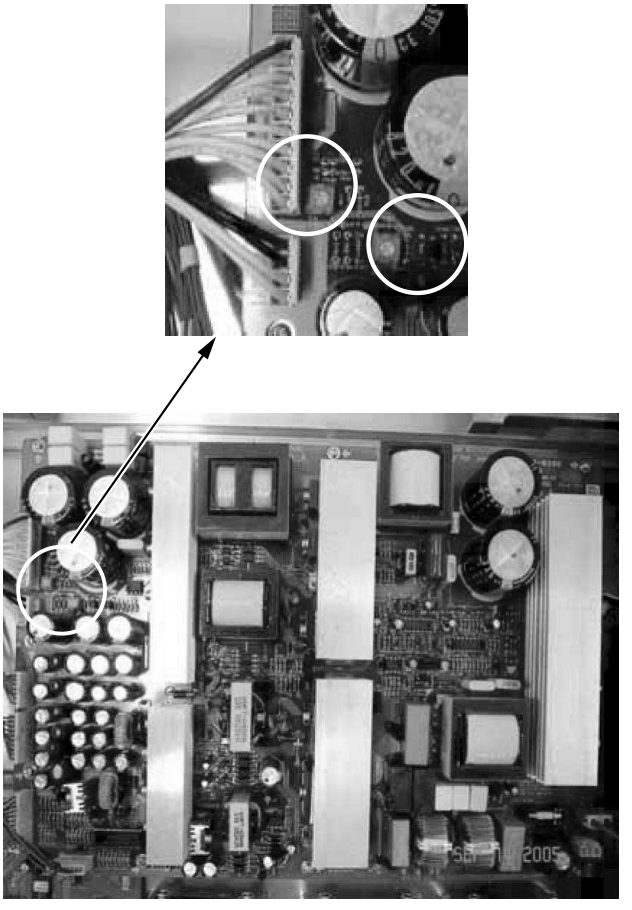
2-3. Va/Vs Voltage Adjustment

2-3-1. Required Equipment

- Digital multi meter
- Signal generator
  Input signal: Input1 (RGB, D-Sub) 1360 × 768@60 Hz
  (Recommended pattern), full white pattern

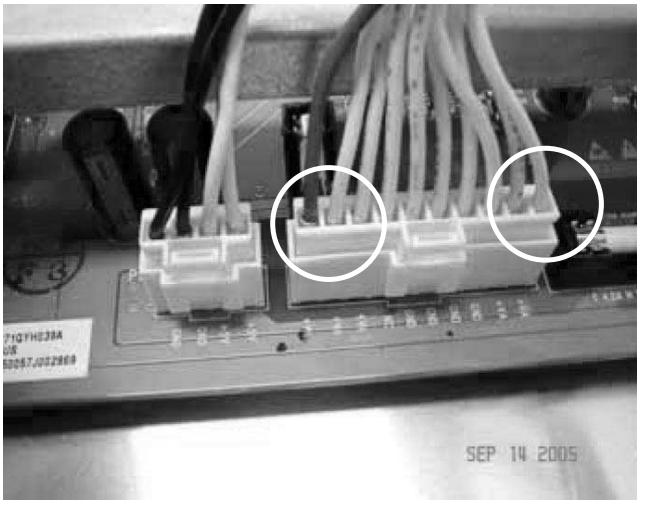
2-3-2. Va Voltage Adjustment

1. Check the label on the right upper side of PDP panel. For label, refer to Section 1-6.
2. Turn the volume (⊘VR700) to be “Va Voltage” on the label.
   It is normally set in the range between 55 V and 65 V.
   - Measuring point: 1, 2-pins/Y SUS board



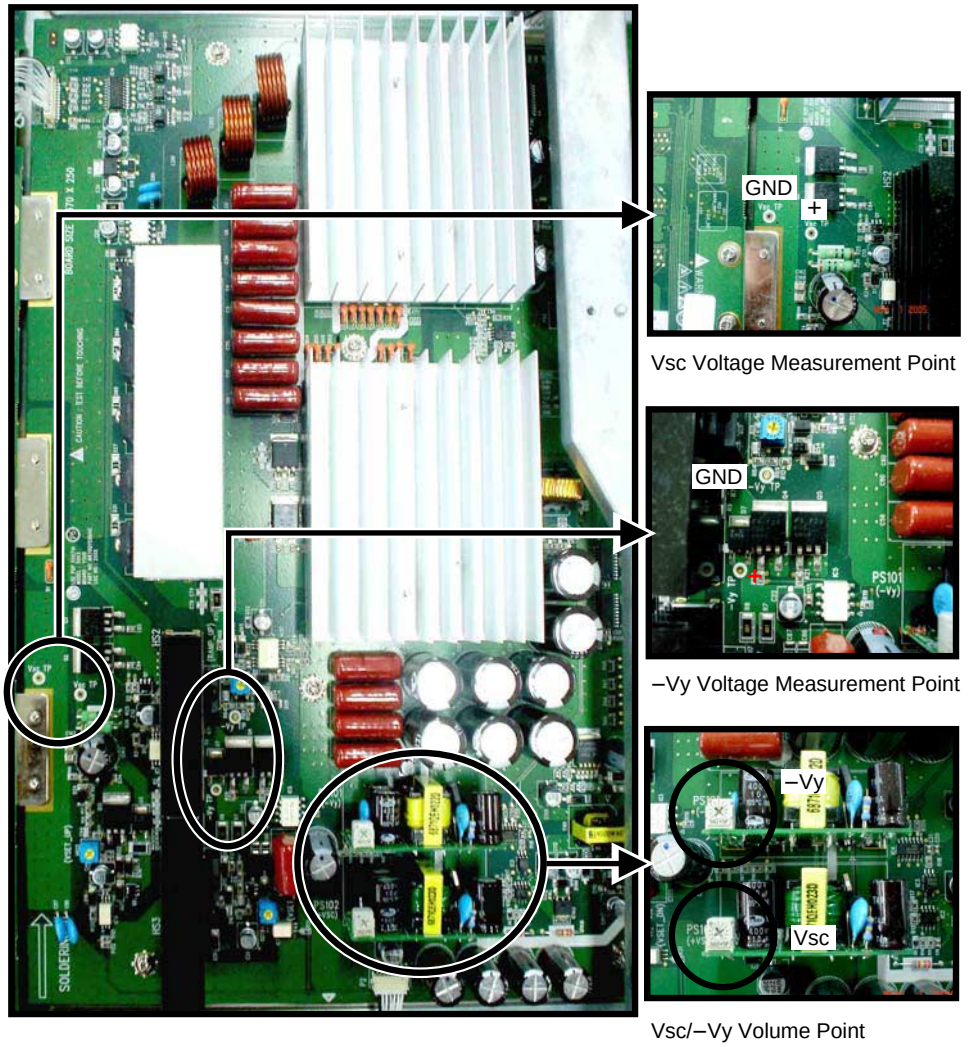
2-3-3. Vs Voltage Adjustment

1. Check the label on the right upper side of PDP panel. For label, refer to Section 1-6.
2. Then turn the volume (⊘VR700) to be “Va Voltage” on the label.
   - Measuring point: 8, 9, 10-pins/Y SUS board

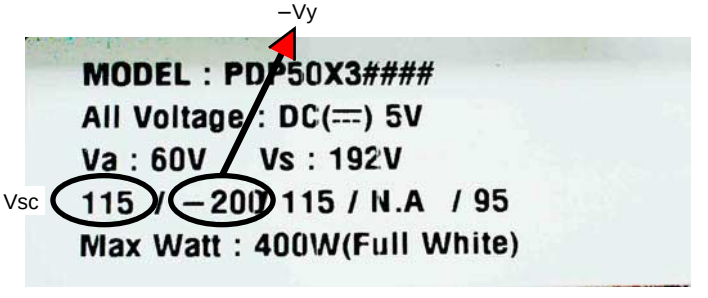


2-4. After Replacing the Y SUS Board

2-4-1. Vsc/–Vy Volatge Adjustment



- About detail voltage value, see the attached label on the panel. (Refer to Section 1-6.)
- After measuring at “TP” proper point, control Vsc/–Vy volume point if values were wrong case.



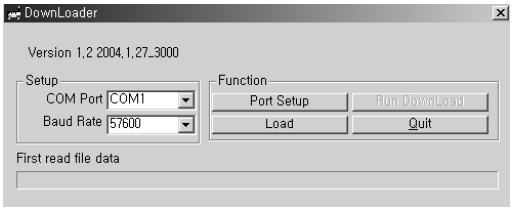
2-5. Flash Down-loading Method

Preparation

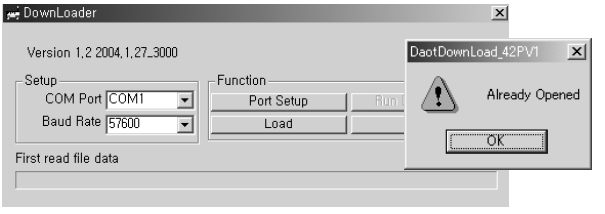
1. Connect this unit with PC using the RS-232C cable.
2. Disconnect the AC power cord of this unit.

Download

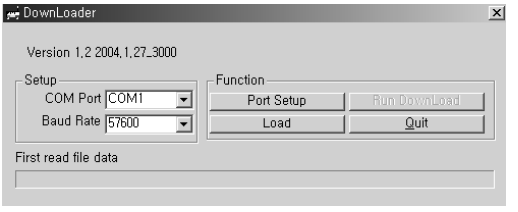
1. Start the file, “FWD50PX2_Down.exe”.
2. Select “COM1” as COM Port and “57600” as baud rate as below picture.

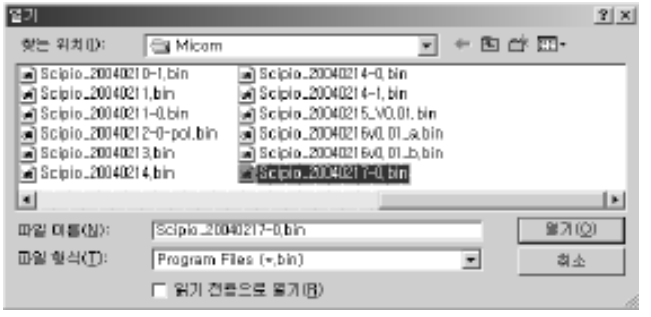


3. Click the Port Setup, then click the OK button.

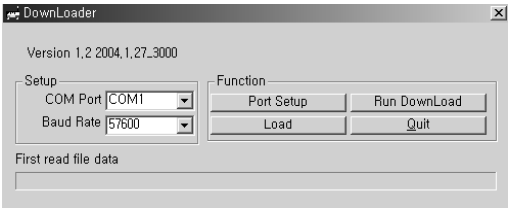


4. Click the Load button, then select the file from the designated folder.

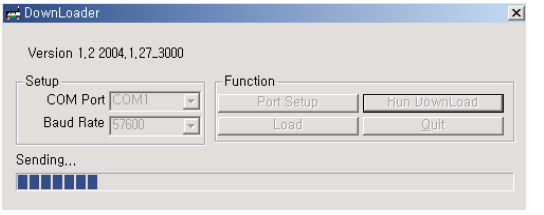




5. Click the Run DownLoad button.



Download is started. (Down Load Time : about 5 minutes)



If down load is finished, the monitor will be re-booted automatically.

Notes

- Do not remove AC cord from PC and monitor while down load operation is being proceeded.
- After processing micom update with ISP program, please execute following in order for the unit to maintain “Shipping default condition”.
  - ✻ Execute EXCEPT WB in INITIALIZATION.
  - ✻ Execute COPY WB DATA in WB DEFAULT DATA.
  - ✻ Execute INIT GOODS in FOR TEST.

2-6. DEVICEINFO Section

1. Connect PC to PDP using the serial cable.
2. Set the port.
   (1) Select the model. (FWD-50PX2)
   (2) Select the port. (COM1, COM2, COM3 or COM4)
   Note
   The initial setting is COM1.
3. Click the Read button in “Model Name”.
   (Data reading)
   If the data reading is completed successfully, the setting in the port that has been selected in step 2 can be performed. If not, return to step 2 and select another port. Then, perform the data reading again.
4. Data writing
   Modify: Model name, serial number, operating time
   Write: Model name, serial number, operating time

Section 3
Troubleshooting

3-1. Self Diagnosis Operation

Check Items	Status
Panel Communication error	Power Off → LED Blinking 2 times
FAN Abnormal	Power On → LED Blinking 3 times
Temp. Abnormal	Power Off → LED Blinking 4 times
Voltage Abnormal*	Power Off → LED Blinking 5 times

*: There is abnormal state in any of 5 V/9 V/3.3 V/Vs/Va/12V that is output from the G board.

3-2. Check Point

3-2-1. A Board

LED symptoms

1. No LED flashing

Cause 1: G board can't supply 5 V.
(Check 3 and 4-pins of the CN9 on the A board.)
→ Check the connector, or replace the G board.

Cause 2: Pattern on the A board is short.
→ Replace the A board or H2 board.

2. Only red LED lighting (No power on)

Cause 1: Check the 5 V line from the G board to the A board.
(Check 1-pin of the CN9 on the A board.)
→ If the 5 V line is abnormal, check the connector, or replace the G board. If it is ok, replace the A board.

Cause 2: Micom halt
→ Replace the A board.

3. Only amber LED lighting (No power on)

Cause 1: Micom halt → Replace the A board.

4. Repeated blinking from red to green LED flashing (No power on)

Cause 1: A board is damaged.
→ Replace the A board.

Cause 2: G board can't supply another voltage.
→ Replace the G board.

5. Blinking red LED many times.

Refer to Section 3-1.

Raster symptoms (If LED is ok)

1. No raster
(First check back raster if plasma display panel is on)

Cause 1: If it is ok, replace the A board.

Cause 2: If it is not, replace the G board or plasma display panel.

2. No raster at special mode.

Cause 1: Replace the A board.

Cause 2: If there is no raster after inputting the DVI signal, check EDID.

3. Abnormal raster

Cause 1: When you change A board, it is abnormal.
→ Plasma display panel has problem.

Sound Symptoms

1. You can't hear sound output

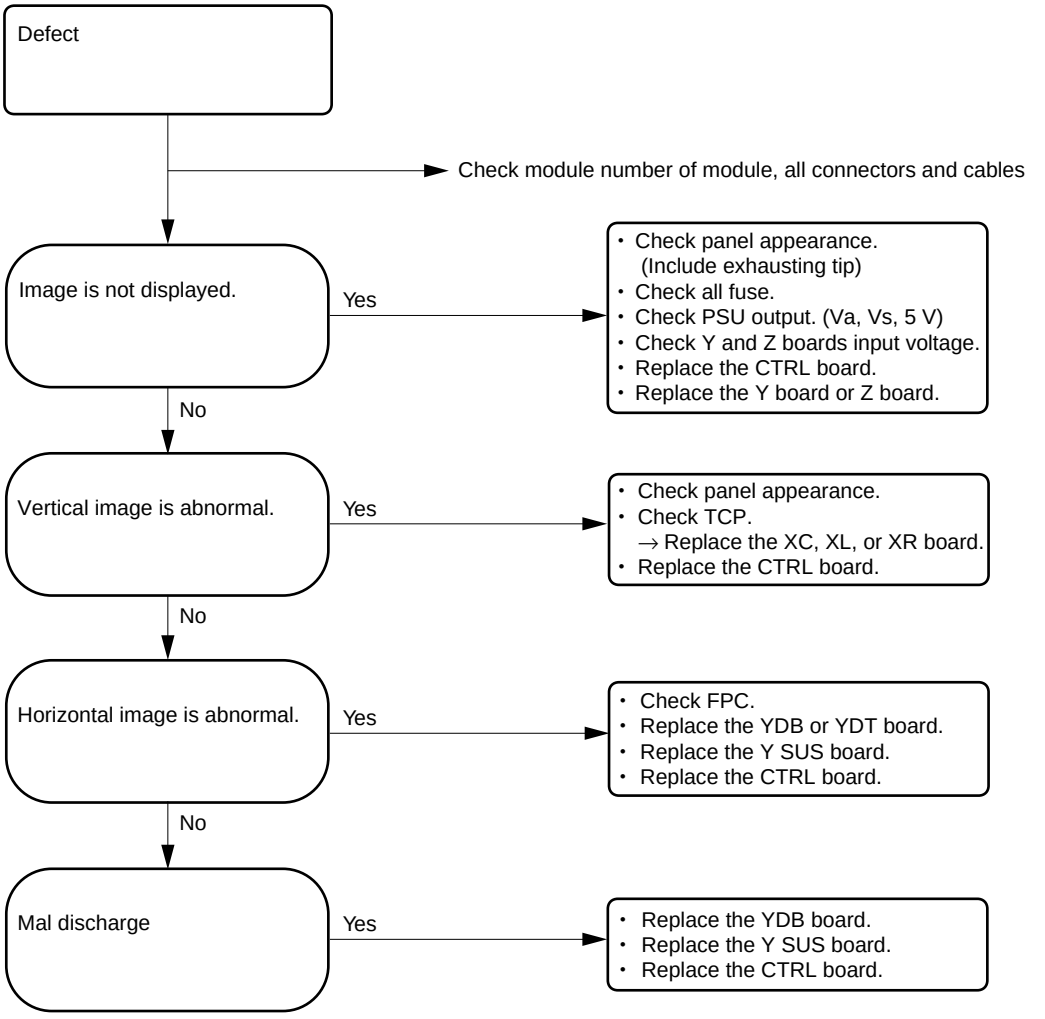
Cause 1: Check 1 and 3-pins of the CN1 on the L board. If it is ok, replace the L board.
The 3-pin of CN1 is the L/R output terminal of the audio signal. Check the signal using the oscilloscope. If there is no signal, the A board is the cause of the trouble. Otherwise, the L board is the cause of the trouble.

Cause 2: If it is not, replace the A board.

2. Abnormal sound

Cause 1: Replace the L board.

3-3. Summary of Troubleshooting Guide


Defect
Check module number of module, all connectors and cables
Image is not displayed.
Yes
• Check panel appearance.
(Include exhausting tip)
• Check all fuse.
• Check PSU output. (Va, Vs, 5 V)
• Check Y and Z boards input voltage.
• Replace the CTRL board.
• Replace the Y board or Z board.
No
Vertical image is abnormal.
Yes
• Check panel appearance.
• Check TCP.
→ Replace the XC, XL, or XR board.
• Replace the CTRL board.
No
Horizontal image is abnormal.
Yes
• Check FPC.
• Replace the YDB or YDT board.
• Replace the Y SUS board.
• Replace the CTRL board.
No
Mal discharge
Yes
• Replace the YDB board.
• Replace the Y SUS board.
• Replace the CTRL board.

3-4. Image Trouble

Main symptoms

- Dot noise
- Picture noise
- Bad color
- Vertical dot noise
- Unstable image
- No image
- Broken OSD
- No inversion
- No power saving
- Clock error
- No screen saver
- Flashing picture
- Dark picture
- Unstable caption/text

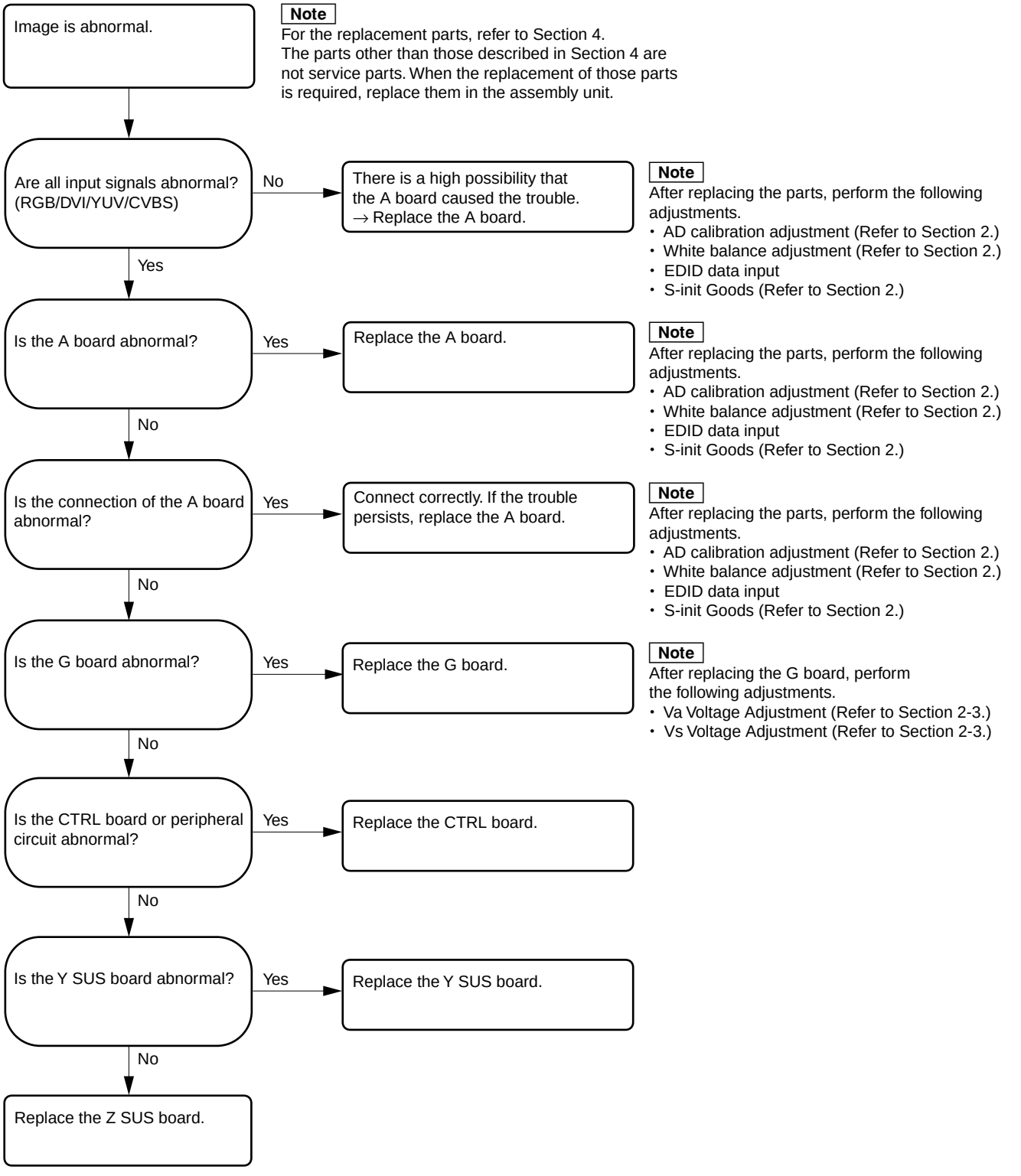
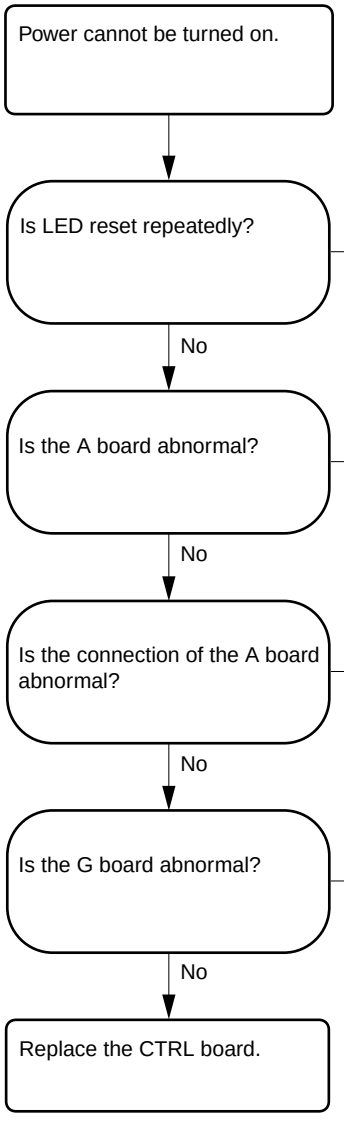


Image is abnormal.
Note
For the replacement parts, refer to Section 4.
The parts other than those described in Section 4 are not service parts. When the replacement of those parts is required, replace them in the assembly unit.
Are all input signals abnormal? (RGB/DVI/YUV/CVBS)
No
There is a high possibility that the A board caused the trouble.
→ Replace the A board.
Note
After replacing the parts, perform the following adjustments.
• AD calibration adjustment (Refer to Section 2.)
• White balance adjustment (Refer to Section 2.)
• EDID data input
• S-init Goods (Refer to Section 2.)
Yes
Is the A board abnormal?
Yes
Replace the A board.
Note
After replacing the parts, perform the following adjustments.
• AD calibration adjustment (Refer to Section 2.)
• White balance adjustment (Refer to Section 2.)
• EDID data input
• S-init Goods (Refer to Section 2.)
No
Is the connection of the A board abnormal?
Yes
Connect correctly. If the trouble persists, replace the A board.
Note
After replacing the parts, perform the following adjustments.
• AD calibration adjustment (Refer to Section 2.)
• White balance adjustment (Refer to Section 2.)
• EDID data input
• S-init Goods (Refer to Section 2.)
No
Is the G board abnormal?
Yes
Replace the G board.
Note
After replacing the G board, perform the following adjustments.
• Va Voltage Adjustment (Refer to Section 2-3.)
• Vs Voltage Adjustment (Refer to Section 2-3.)
No
Is the CTRL board or peripheral circuit abnormal?
Yes
Replace the CTRL board.
No
Is the Y SUS board abnormal?
Yes
Replace the Y SUS board.
No
Replace the Z SUS board.

3-5. Power (G Board) Trouble



Note
For the replacement parts, refer to Section 4.
The parts other than those described in Section 4 are not service parts. When the replacement of those parts is required, replace them in the assembly unit.

There is a high possibility that the A board caused the trouble.
→ Replace the A board.

Note
After replacing the parts, perform the following adjustments.
- AD calibration adjustment (Refer to Section 2.)
- White balance adjustment (Refer to Section 2.)
- EDID data input
- S-init Goods (Refer to Section 2.)

Replace the A board.

Note
After replacing the parts, perform the following adjustments.
- AD calibration adjustment (Refer to Section 2.)
- White balance adjustment (Refer to Section 2.)
- EDID data input
- S-init Goods (Refer to Section 2.)

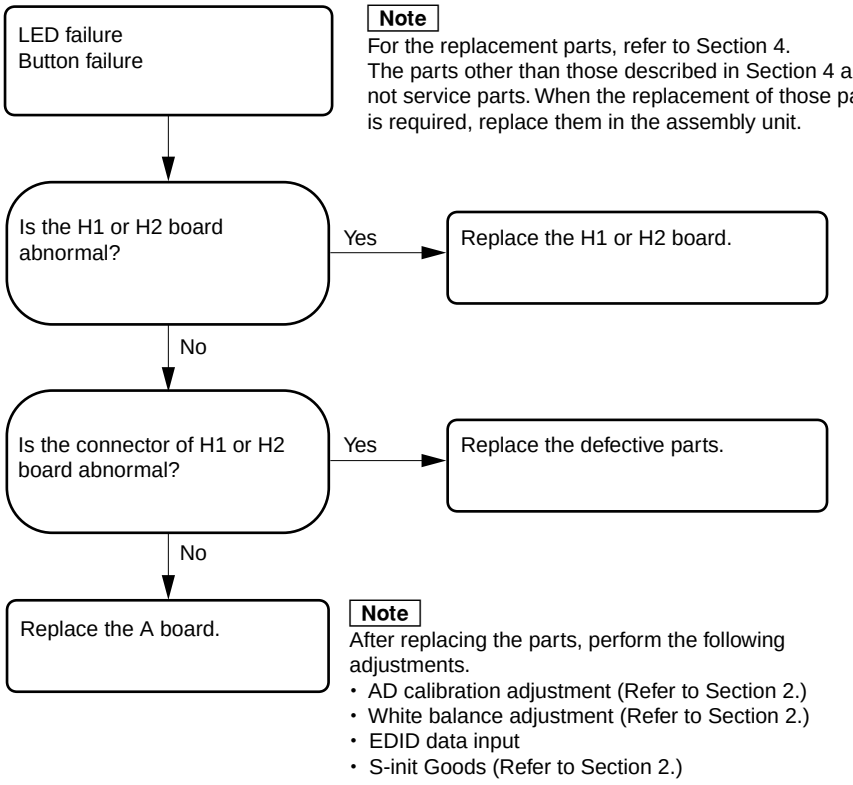
Connect correctly. If the trouble persists, replace the A board.

Note
After replacing the parts, perform the following adjustments.
- AD calibration adjustment (Refer to Section 2.)
- White balance adjustment (Refer to Section 2.)
- EDID data input
- S-init Goods (Refer to Section 2.)

Replace the G board.

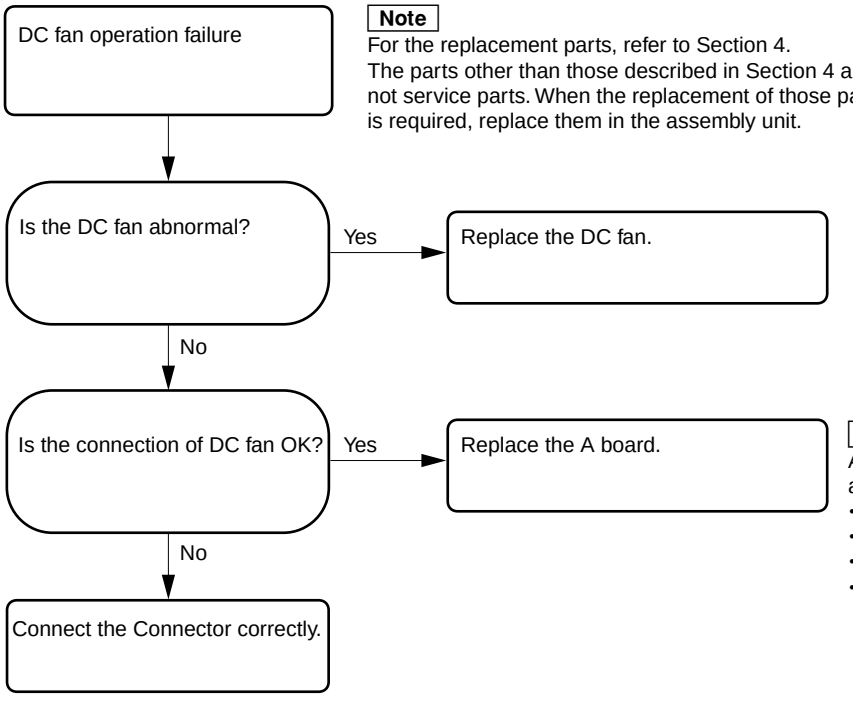
Note
After replacing the G board, perform the following adjustments.
- Va Voltage Adjustment (Refer to Section 2-3.)
- Vs Voltage Adjustment (Refer to Section 2-3.)

3-6. Other Trouble



Note
For the replacement parts, refer to Section 4.
The parts other than those described in Section 4 are not service parts. When the replacement of those parts is required, replace them in the assembly unit.

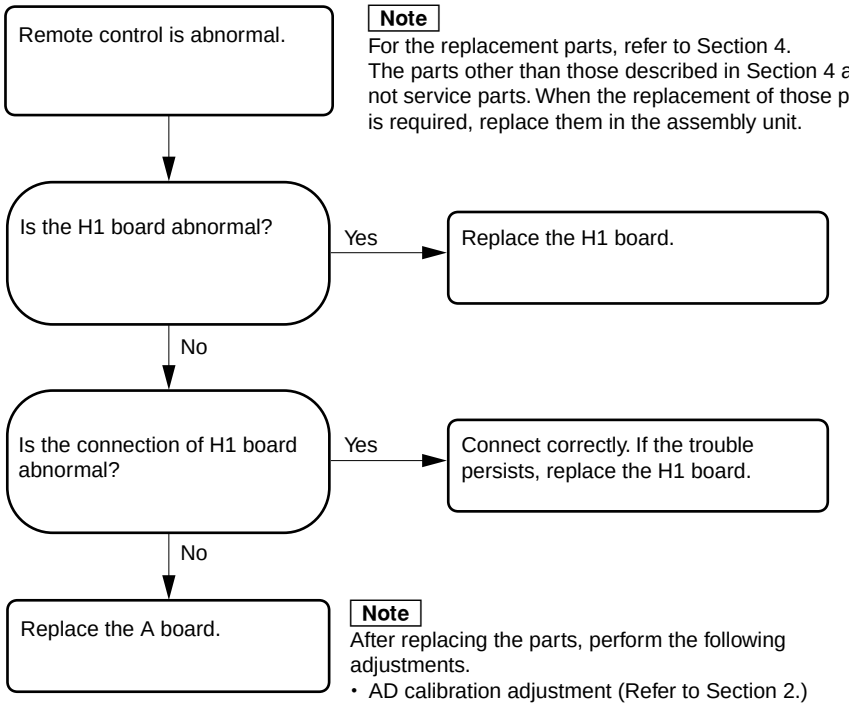
Note
After replacing the parts, perform the following adjustments.
- AD calibration adjustment (Refer to Section 2.)
- White balance adjustment (Refer to Section 2.)
- EDID data input
- S-init Goods (Refer to Section 2.)



Note
For the replacement parts, refer to Section 4.
The parts other than those described in Section 4 are not service parts. When the replacement of those parts is required, replace them in the assembly unit.

Note
After replacing the parts, perform the following adjustments.
- AD calibration adjustment (Refer to Section 2.)
- White balance adjustment (Refer to Section 2.)
- EDID data input
- S-init Goods (Refer to Section 2.)

3-7. Remote Control Trouble



Note

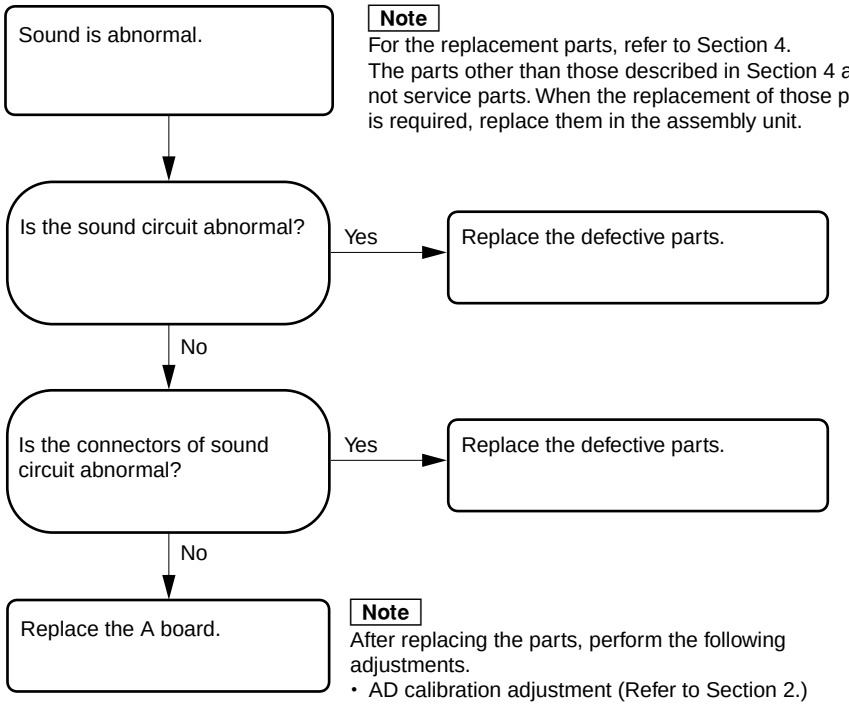
For the replacement parts, refer to Section 4.
The parts other than those described in Section 4 are not service parts. When the replacement of those parts is required, replace them in the assembly unit.

Note

After replacing the parts, perform the following adjustments.

- AD calibration adjustment (Refer to Section 2.)
- White balance adjustment (Refer to Section 2.)
- EDID data input
- S-init Goods (Refer to Section 2.)

3-8. Sound Trouble



Note

For the replacement parts, refer to Section 4.
The parts other than those described in Section 4 are not service parts. When the replacement of those parts is required, replace them in the assembly unit.

Note

After replacing the parts, perform the following adjustments.

- AD calibration adjustment (Refer to Section 2.)
- White balance adjustment (Refer to Section 2.)
- EDID data input
- S-init Goods (Refer to Section 2.)

Section 4
Spare Parts

4-1. Notes on Repair Parts

1. Safety Related Components Warning

WARNING

Components marked ⚠ are critical to safe operation. Therefore, specified parts should be used in the case of replacement.

2. Standardization of Parts

Some repair parts supplied by Sony differ from those used for the unit. These are because of parts commonality and improvement.
Parts list has the present standardized repair parts.

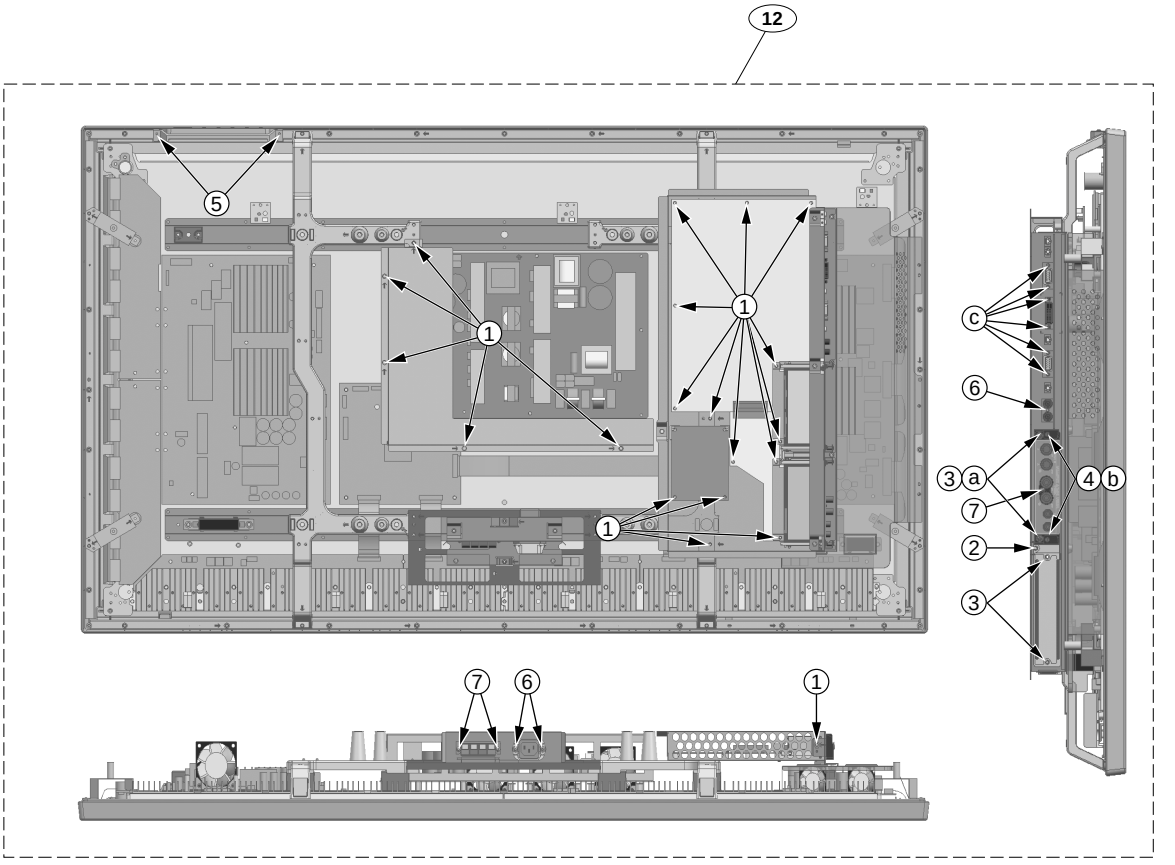
3. Stock of Parts

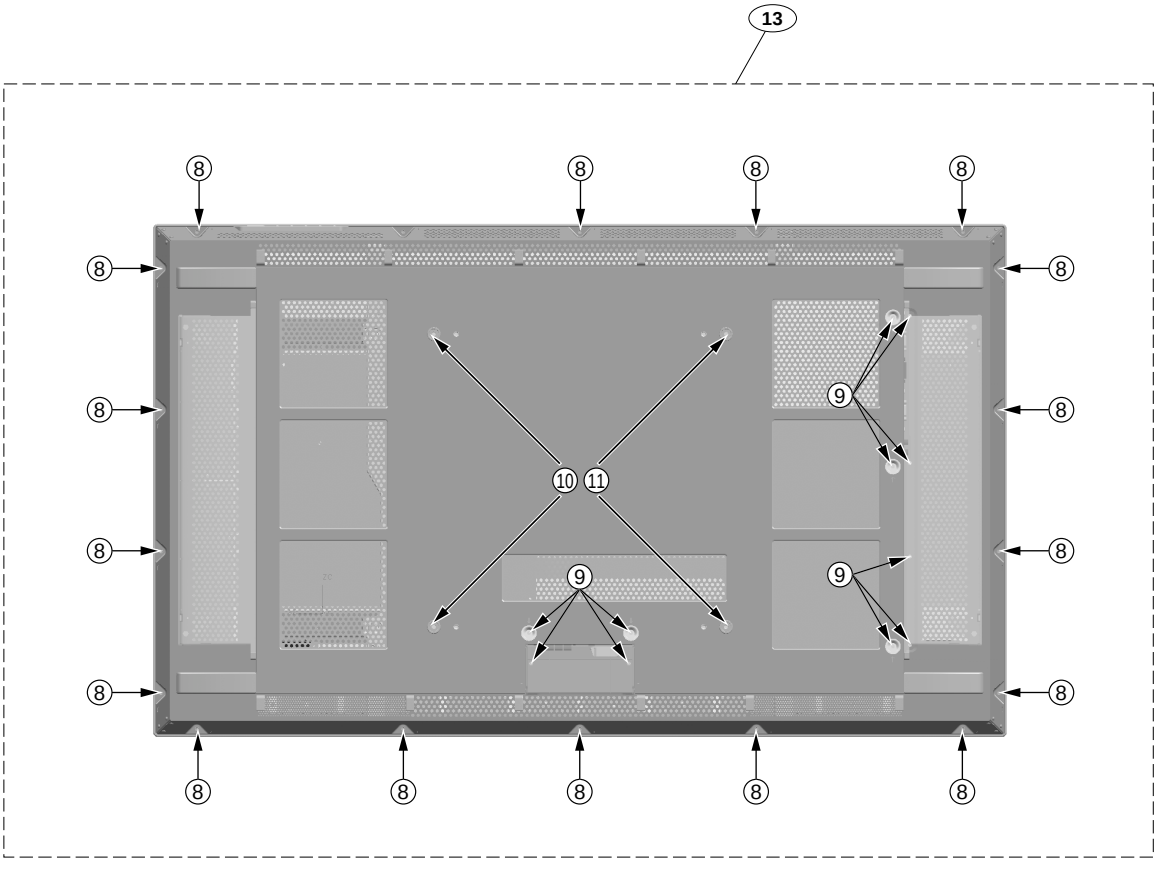
Parts marked with “o” at SP (Supply Code) column of the spare parts list may not be stocked. Therefore, the delivery date will be delayed.

4. Harness

Harnesses with no part number are not registered as spare parts.
In need of repair, get components shown in the list and repair using them.

4-2. Exploded Views





Note : The screws can be ordered in units of screw kit. (Sony part No. 12, 13)

No.	Part No.	SP	Description
12	X-2102-795-1	s	SCREW KIT(INSIDE)
13	X-2102-796-1	s	SCREW KIT(OUTSIDE)

INSIDE SCREW KIT

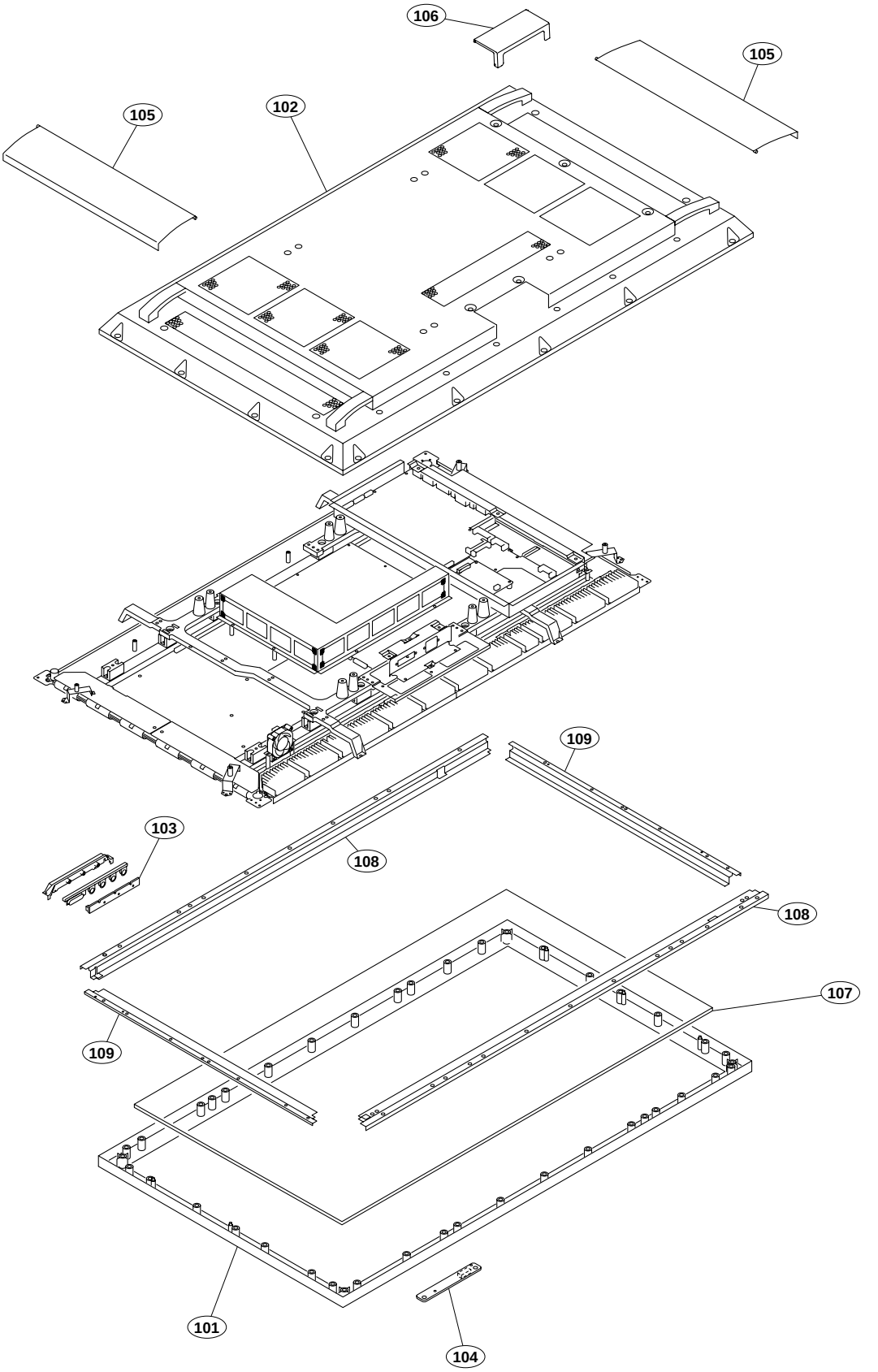
①	339-00 8M
②	1SZZTMP009B
③	1SZZTMF016B
④	1SZZTMF012A
⑤	332-09 5L
⑥	1SZZTMF016D
⑦	1SZZTYT001D
ⓐ	1NHB0302120
ⓑ	1WZZTKK005B
ⓒ	1SZZTMH005A

OUTSIDE SCREW KIT

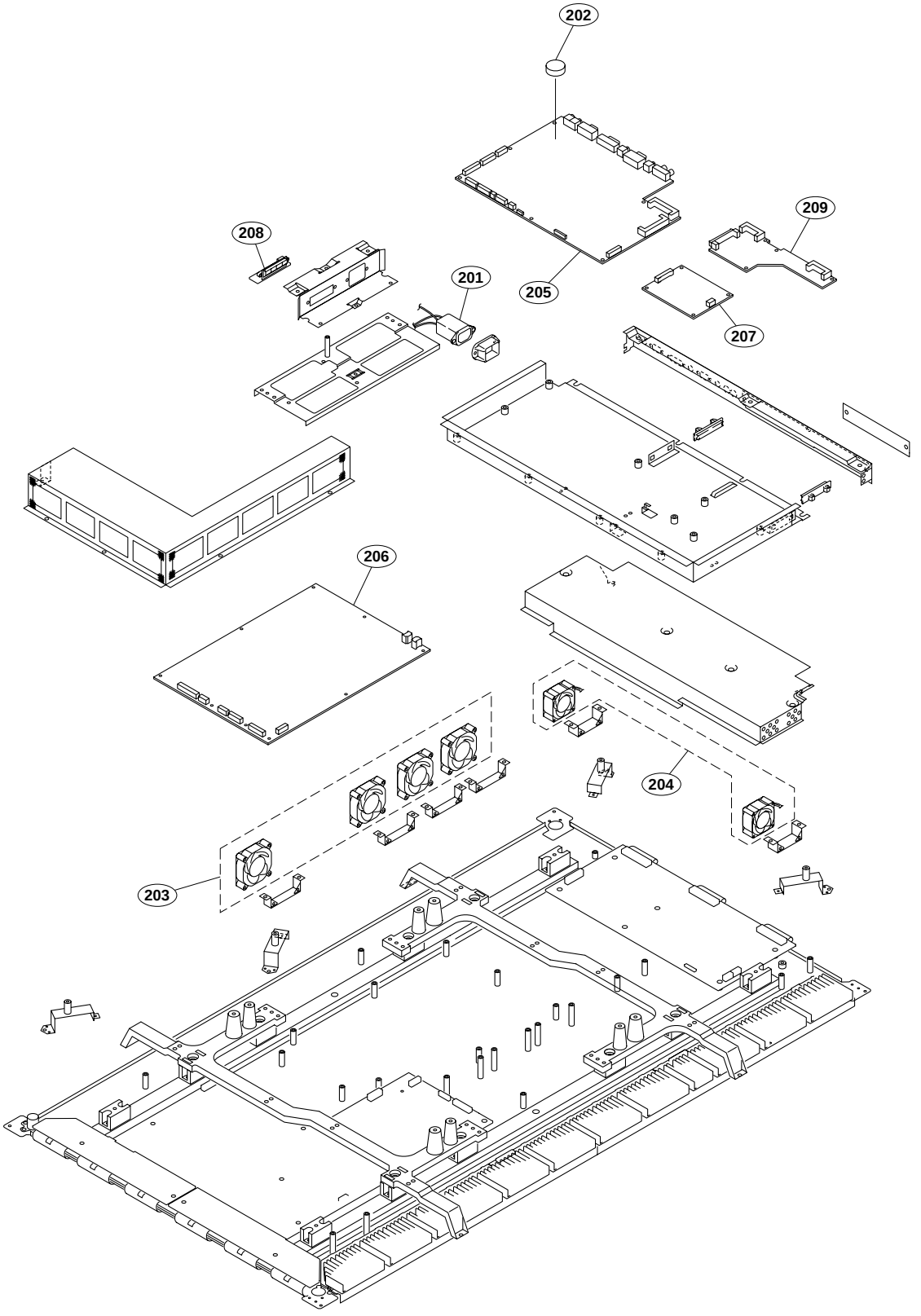
⑧	1SZZTYT003B
⑨	1SZZTMF016B
⑩	1WZZTKK004B
⑪	1SZZTMH006B

・The numbers encircled by round corresponds to numbers in illustrations.

Cover

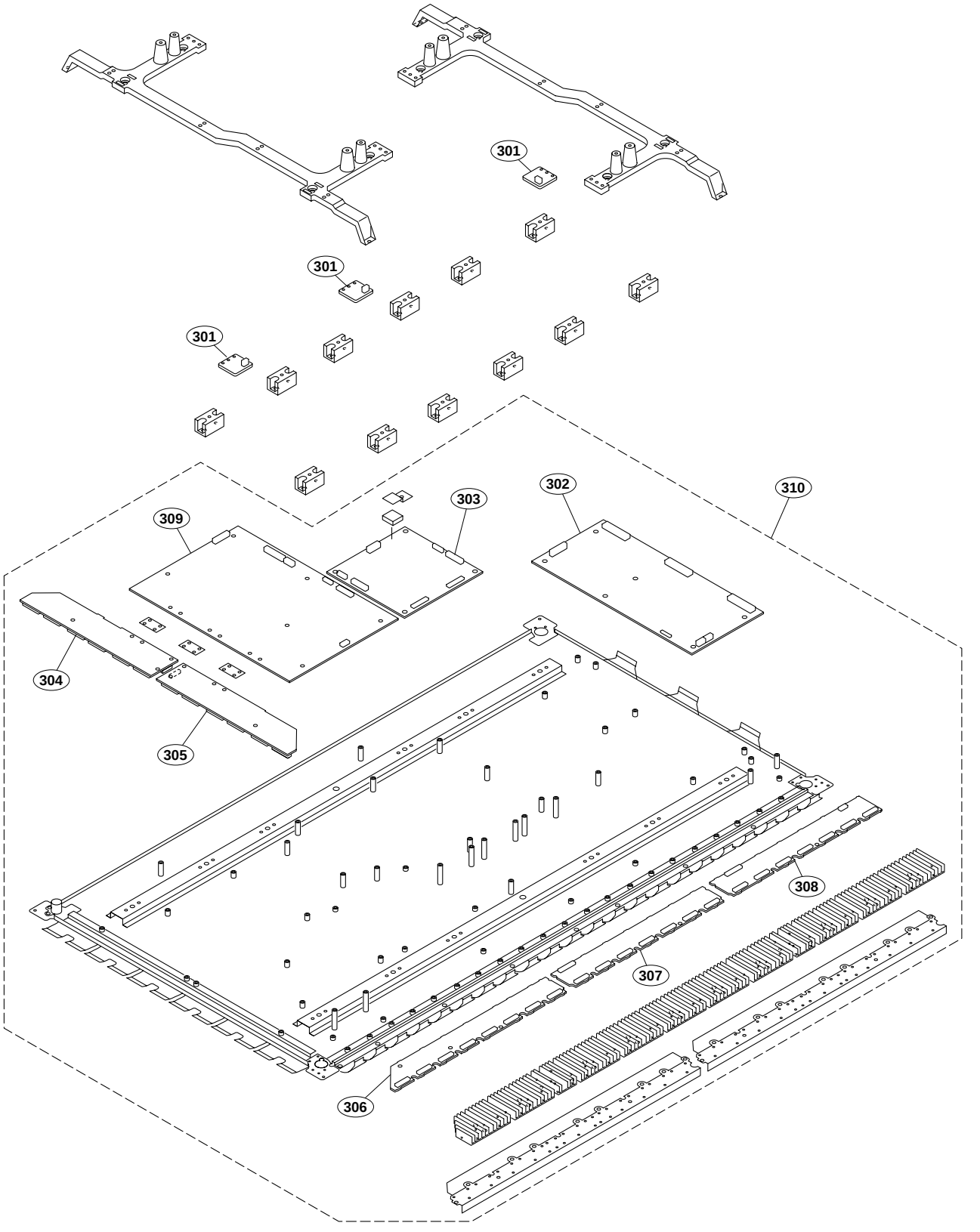


No.	Part No.	SP	Description
101	X-2102-793-1	s	BEZEL ASSY(SILVER)
	X-2102-810-1	s	BEZEL ASSY(BLACK)
102	X-2102-794-1	s	REAR CABINET ASSY
103	1-789-198-11	s	MOUNTED BOARD, H2
104	1-789-199-11	s	MOUNTED BOARD, H1
105	2-657-353-01	s	DOOR SIDE
106	2-657-354-01	s	DOOR BOTTOM
107	2-657-360-01	s	GLASS,FILTER
108	X-2109-497-1	o	FRAME(H) ASSY
109	X-2109-498-1	o	FRAME(V) ASSY

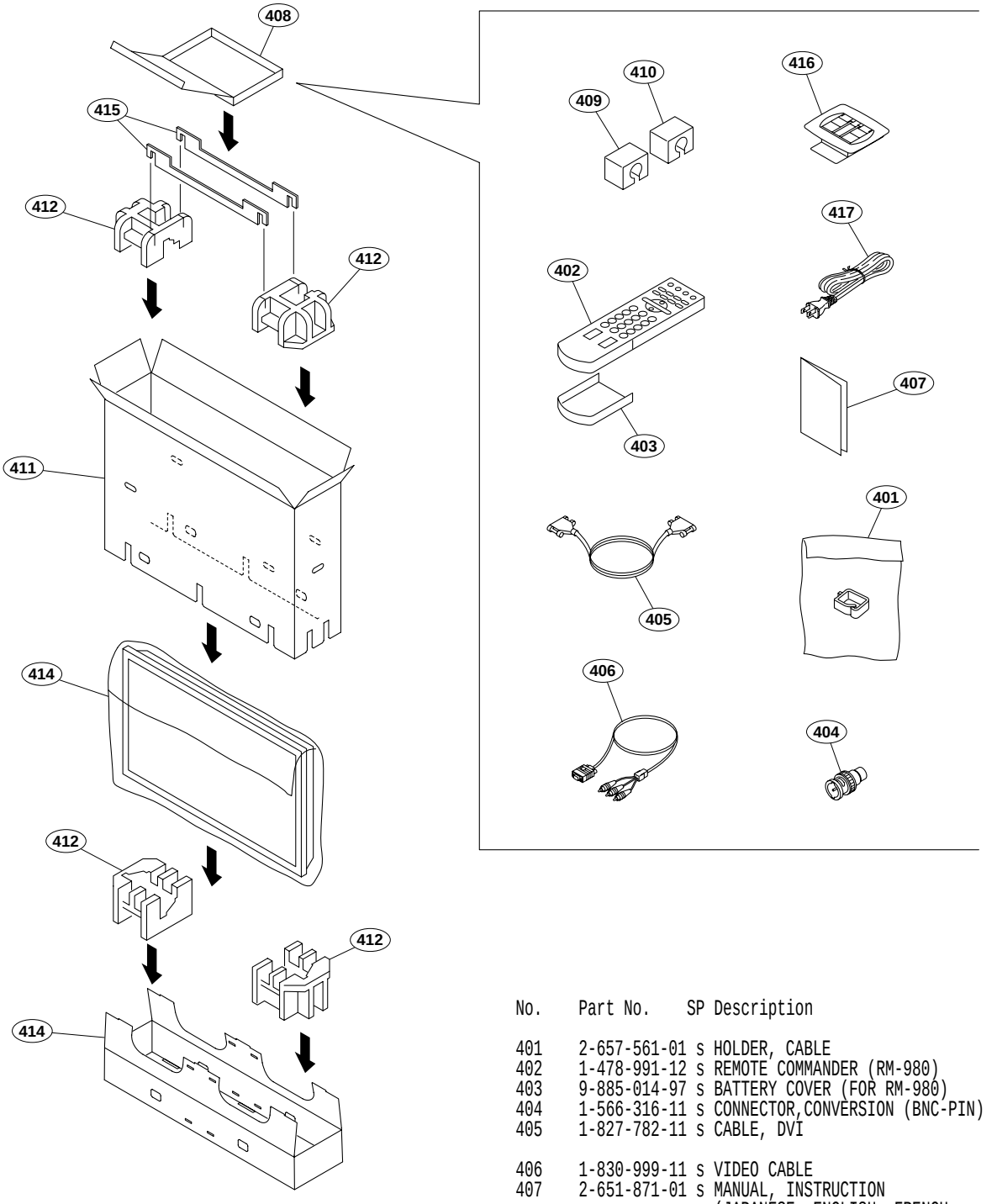


No.	Part No.	SP	Description
201	1-417-398-21	s	AC INLET
202	1-528-174-11	s	BATTERY, LITHIUM (CR2032 TYPE)
203	1-787-434-11	s	FAN, DC
204	1-787-437-11	s	FAN, DC
205	1-789-374-11	s	MOUNTED CIRCUIT BOARD, A
206	1-789-375-11	s	MOUNTED CIRCUIT BOARD, G
207	1-789-376-11	s	MOUNTED CIRCUIT BOARD, L
208	1-789-377-11	s	MOUNTED CIRCUIT BOARD, T
209	1-789-378-11	s	MOUNTED CIRCUIT BOARD, I

Panel

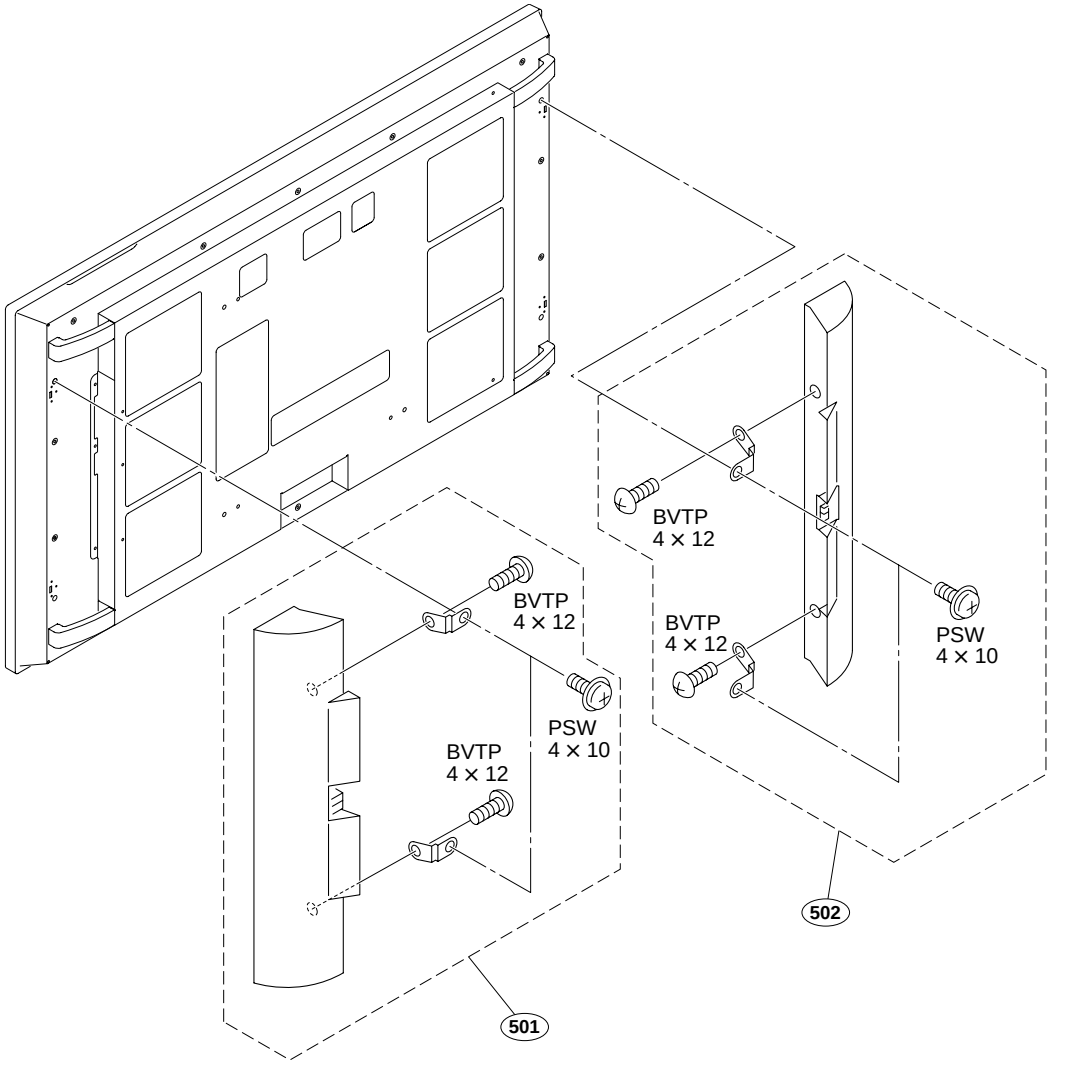


No.	Part No.	SP	Description
301	1-789-203-11	s	MOUNTED BOARD, TEMP
302	1-789-379-11	s	MOUNTED CIRCUIT BOARD, Z-SUS
303	1-789-380-11	s	MOUNTED CIRCUIT BOARD, CTRL
304	1-789-381-11	s	MOUNTED CIRCUIT BOARD, YDT
305	1-789-382-11	s	MOUNTED CIRCUIT BOARD, YDB
306	1-789-383-11	s	MOUNTED CIRCUIT BOARD, XL
307	1-789-384-11	s	MOUNTED CIRCUIT BOARD, XC
308	1-789-385-11	s	MOUNTED CIRCUIT BOARD, XR
309	1-789-386-11	s	MOUNTED CIRCUIT BOARD, Y-SUS
310	1-802-006-11	s	PANEL, PLASMA DISPLAY



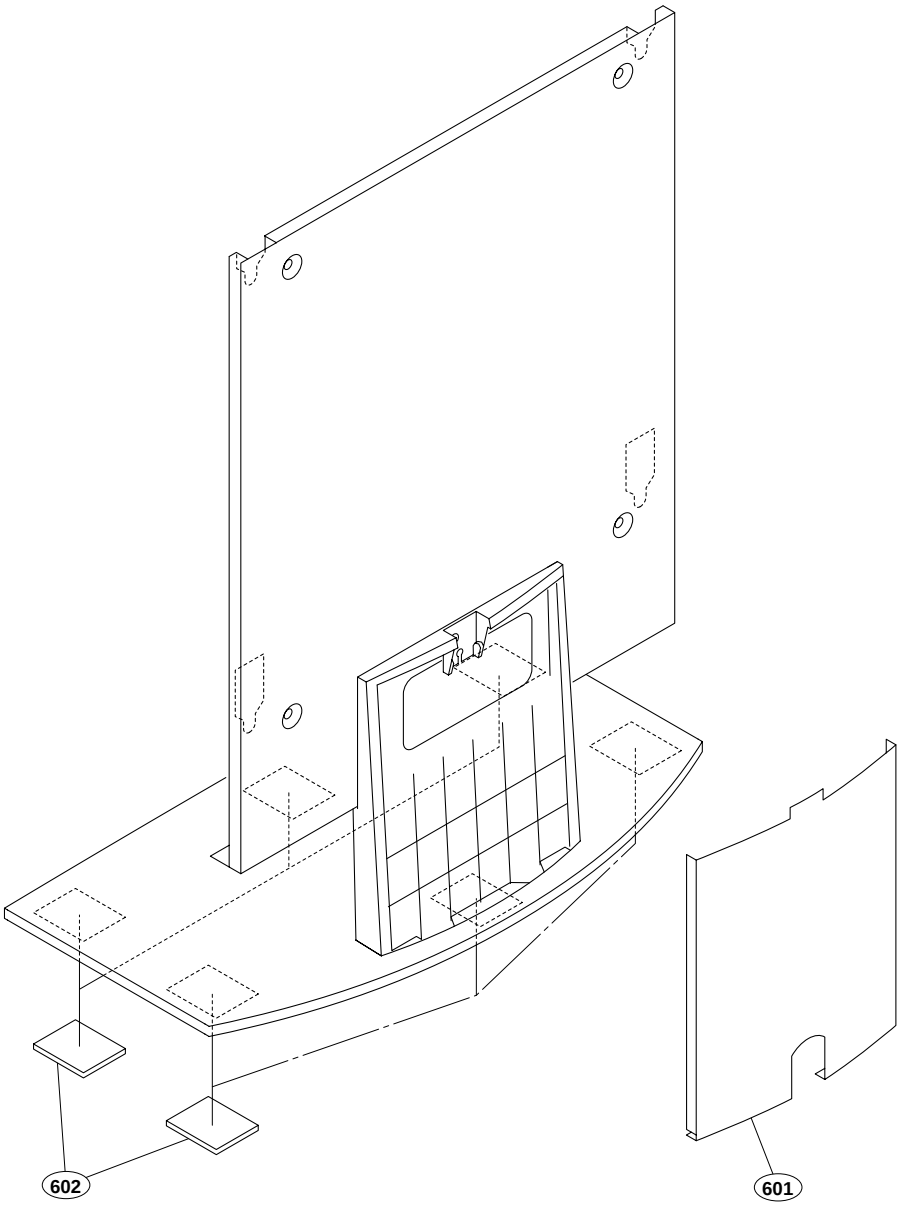
No.	Part No.	SP	Description
401	2-657-561-01	s	HOLDER, CABLE
402	1-478-991-12	s	REMOTE COMMANDER (RM-980)
403	9-885-014-97	s	BATTERY COVER (FOR RM-980)
404	1-566-316-11	s	CONNECTOR,CONVERSION (BNC-PIN)
405	1-827-782-11	s	CABLE, DVI
406	1-830-999-11	s	VIDEO CABLE
407	2-651-871-01	s	MANUAL, INSTRUCTION (JAPANESE, ENGLISH, FRENCH, GERMAN, SPANISH, ITALIAN, SIMPLIFIED CHINESE)
408	2-657-560-01	o	ACCESSORY BOX
409	2-990-242-01	s	HOLDER (B),PLUG
410	3-613-640-01	o	HOLDER (C), PLUG
411	2-657-461-01	o	INDIVIDUAL CARTON
412	2-657-462-01	o	CUSHION (TOP & BOTTOM)
413	2-657-463-01	o	TRAY, BOTTOM
414	2-657-464-01	o	BAG, PROTECTION
415	2-657-465-01	o	CARTON, INSIDE
416	3-674-673-01	o	STOPPER (A)
417	⚠ ----------		CORD, POWER (See Sec.1-7. Warning on Power Connection)

SS-SP50FW (Option)



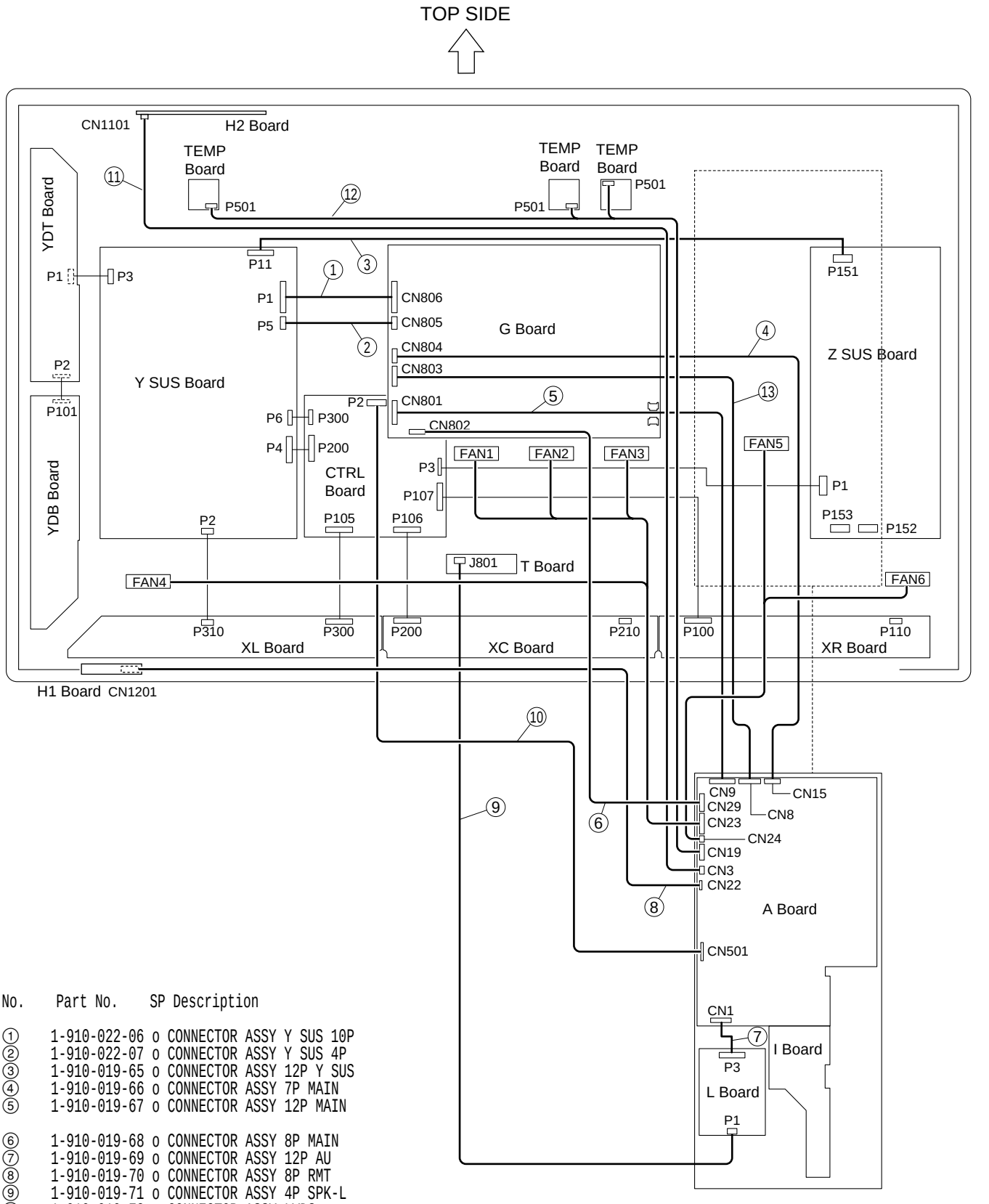
No.	Part No.	SP	Description
501	A-1080-534-A	s	SPEAKER (50R) ASSY (RP) (FOR SS-SP50FW/W (PEARL WHITE))
	A-1080-536-A	s	SPEAKER (50R) ASSY (RP) (FOR SS-SP50FW/S (SILVER))
502	A-1080-535-A	s	SPEAKER (50L) ASSY (RP) (FOR SS-SP50FW/W (PEARL WHITE))
	A-1080-537-A	s	SPEAKER (50L) ASSY (RP) (FOR SS-SP50FW/S (SILVER))
	7-685-661-79	s	SCREW,+BVTP4X12(EP-FE/ZNBK/CM2)

SU-50FW



No.	Part No.	SP	Description
601	2-148-620-01	o	REAR COVER
602	4-092-541-02	s	FOOT

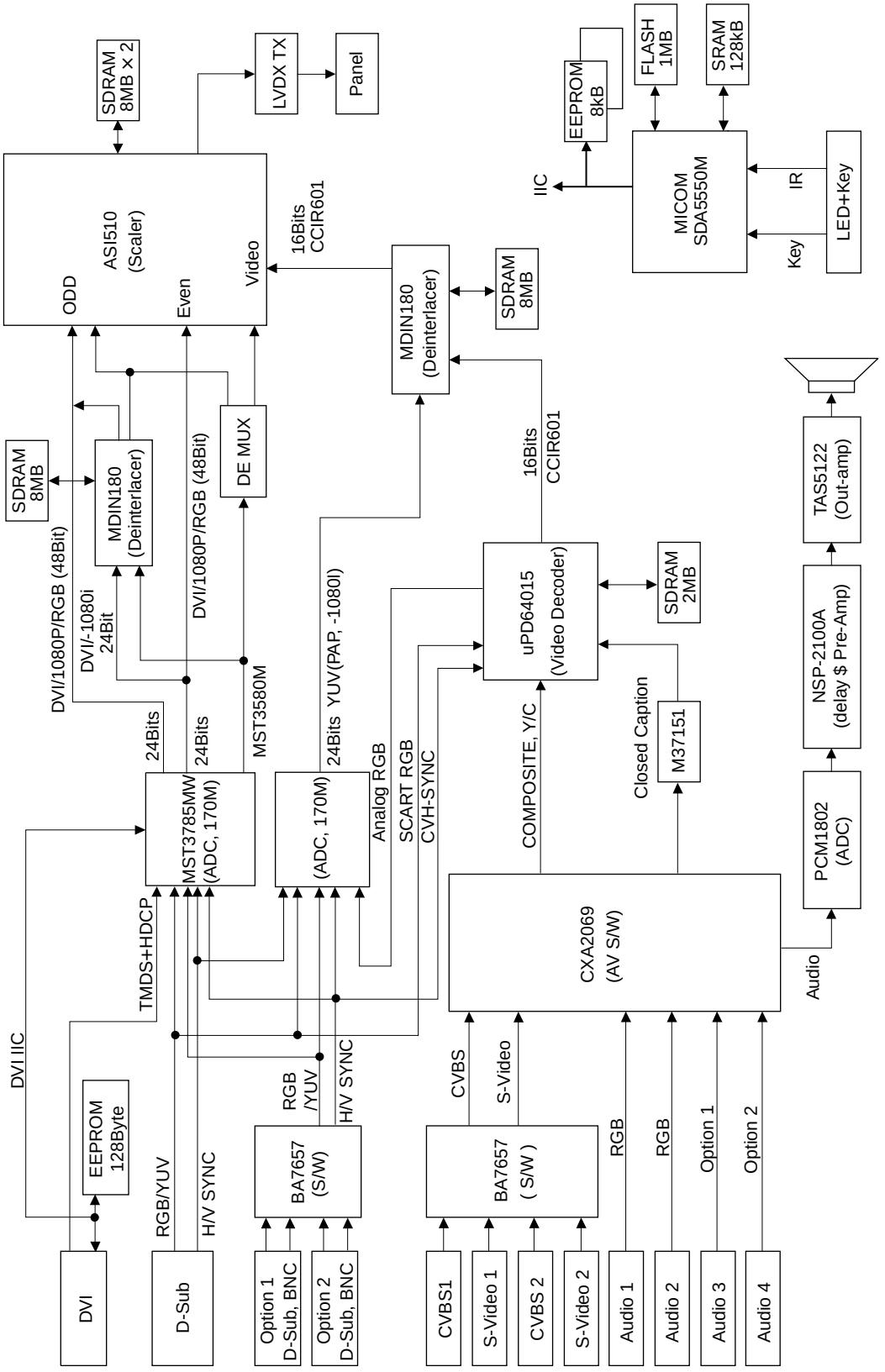
Board Connections



No.	Part No.	SP	Description
①	1-910-022-06	o	CONNECTOR ASSY Y SUS 10P
②	1-910-022-07	o	CONNECTOR ASSY Y SUS 4P
③	1-910-019-65	o	CONNECTOR ASSY 12P Y SUS
④	1-910-019-66	o	CONNECTOR ASSY 7P MAIN
⑤	1-910-019-67	o	CONNECTOR ASSY 12P MAIN
⑥	1-910-019-68	o	CONNECTOR ASSY 8P MAIN
⑦	1-910-019-69	o	CONNECTOR ASSY 12P AU
⑧	1-910-019-70	o	CONNECTOR ASSY 8P RMT
⑨	1-910-019-71	o	CONNECTOR ASSY 4P SPK-L
⑩	1-910-019-72	s	CONNECTOR ASSY LVDS
⑪	1-910-019-73	o	CONNECTOR ASSY 4P KEY
⑫	1-910-019-74	o	CONNECTOR ASSY 9P SENS
⑬	1-910-020-85	o	CONNECTOR ASSY MAIN 10P

• The numbers encircled by round corresponds to those of the left illustration.

Section 5
Block Diagram



SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer :

Check the metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

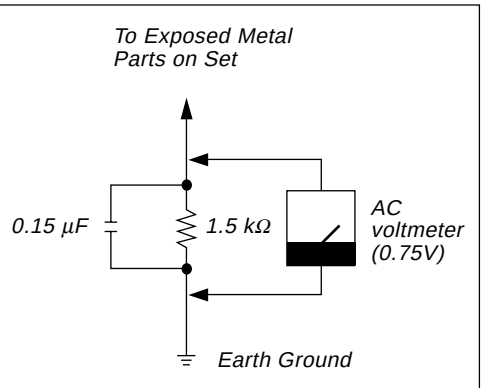


Fig A. Using an AC voltmeter to check AC leakage.

FWD-50PX2 (SY) E
9-878-387-01

Sony Corporation

Printed in Japan
2006. 1 22
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